

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Margaret C. Enos Examiner #: 69738 Date: 7.29.03
 Art Unit: 1751 Phone Number 308-3826 Serial Number: 09/486518
 Mail Box and Bldg/Room Location: CP39030 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Dyeing Composition for Keratin Fibres
 Inventors (please provide full names): Mirielle Maubrou
Marie-Pascale Audoussert
 Earliest Priority Filing Date: 7/20/98

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search claims 20
48

#21 + 42 good

(Closest act is first.)

STAFF USE ONLY

| | Type of Search | Vendors and cost where applicable |
|---------------------------------------|-------------------------------------|-----------------------------------|
| Searcher: <u>EN</u> | NA Sequence (#) _____ | STN <u>\$478.15</u> |
| Searcher Phone #: _____ | AA Sequence (#) _____ | Dialog _____ |
| Searcher Location: _____ | Structure (#) <u>(7) (Subjects)</u> | Questel/Orbit _____ |
| Date Searcher Picked Up: _____ | Bibliographic <u>(and)</u> | Dr. Link _____ |
| Date Completed: <u>8-1-03</u> | Litigation _____ | Lexis/Nexis _____ |
| Searcher Prep & Review Time: <u>5</u> | Fulltext _____ | Sequence Systems _____ |
| Clerical Prep Time: _____ | Patent Family _____ | WWW/Internet _____ |
| Online Time: <u>105</u> | Other _____ | Other (specify) _____ |

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FILE 'REGISTRY' ENTERED AT 12:22:50 ON 01 AUG 2003
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FILE 'LREGISTRY'

L1 STR
L2 STR

FILE 'REGISTRY'

L3 22 S L1
L4 4697 S L1 FUL
SAV L4 EIN558/A
L5 8 S L2
L6 SCR 1077 AND 1832
L7 50 S L2 AND L6
L8 17953 S L2 AND L6 FUL
SAV TEM L8 EIN558A/A
L9 3 S L4 AND L8
L10 17950 S L8 NOT L4

FILE 'HCA'

L11 2 S L9
L12 1488 S L4
L13 11938 S L10
L14 176 S L12 AND L13

FILE 'LCA'

L15 3311 S (COLOR? OR COLOUR? OR PIGMENT? OR DYE? OR STAIN? OR PAI

FILE 'HCA' ENTERED AT 11:46:19 ON 01 AUG 2003

L16 90329 S HAIR? OR KERATIN? OR SHAMPOO? OR SCALP?
L17 163 S L14 AND L16
L18 163 S L17 AND L15

FILE 'LREGISTRY'

L19 STR L1

FILE 'REGISTRY'

L20 5 S L19 SSS SAM SUB=L4
L21 116 S L19 SSS FUL SUB=L4
SAV L21 EIN558B/A

FILE 'HCA'

L22 174 S L21

FILE 'REGISTRY'

L23 17951 S L8 NOT L22

FILE 'HCA'

L24 11938 S L23
L25 98 S L22 AND L24

FILE 'LREGISTRY'

L26 STR L2

FILE 'REGISTRY'

L27 18 S L26 SSS SAM SUB=L8
L28 SCR 2043
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SAV L30 EIN558C/A
L31 17951 S L8 NOT L21
L32 489 S L30 NOT L21

FILE 'HCA'

L33 174 S L21
L34 532 S L32
L35 73 S L33 AND L34
L36 73 S L35 AND L16
L37 73 S L36 AND L15
L38 4 S L37 AND (1907-1998/PY OR 1907-1998/PRY)
L39 44 S L18 AND (1907-1998/PY OR 1907-1998/PRY)

FILE 'REGISTRY'

E 3-AMINO-2-CHLORO-6-METHYLPHENOL/CN
L40 1 S E3

FILE 'HCA'

L41 166 S L40
L42 114 S L41 AND L12

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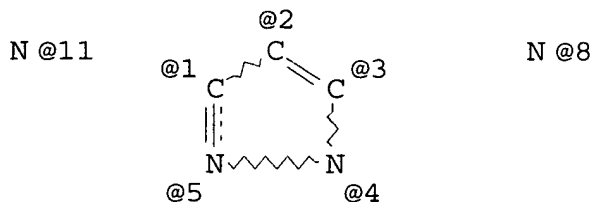
L43 4697 S L4 NOT L40

FILE 'HCA'

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L46 4 S L45 AND (1907-1998/PY OR 1907-1998/PRY)
L47 114 S L42 AND L16 AND L15
L48 26 S L47 AND (1907-1998/PY OR 1907-1998/PRY)
L49 6 S L11 OR L38 OR L46
L50 22 S L48 NOT L49
L51 18 S L39 NOT (L49 OR L50)
L52 4 S L49 AND (1907-1998/PY OR 1907-1998/PRY)
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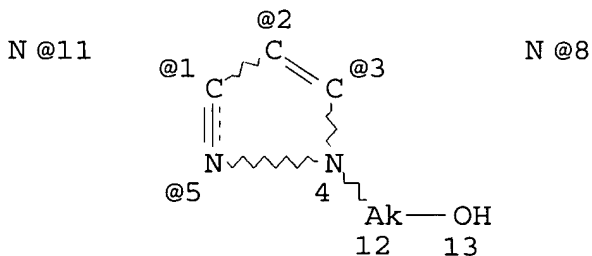
=> d l21 que stat
L1 STR



VPA 11-3/2/1/5/4 U
VPA 8-3/2/1/5/4 U
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE
L4 4697 SEA FILE=REGISTRY SSS FUL L1
L19 STR



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VPA 8-5/1/2/3 U
NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

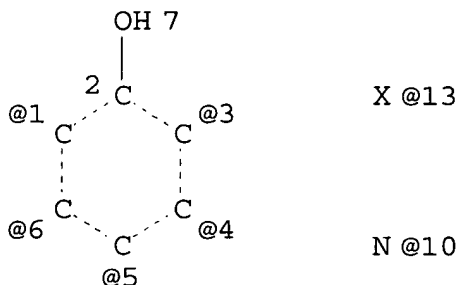
GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L21 116 SEA FILE=REGISTRY SUB=L4 SSS FUL L19

100.0% PROCESSED 4697 ITERATIONS
SEARCH TIME: 00.00.01

116 ANSWERS

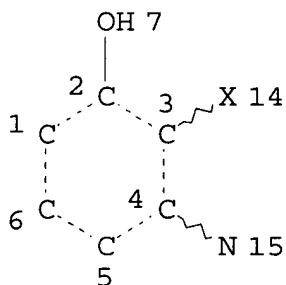
=> d l30 que stat
L2 STR



VPA 13-3/4/5/6/1 U
VPA 10-3/4/5/6/1 U
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L6 SCR 1077 AND 1832
L8 17953 SEA FILE=REGISTRY SSS FUL L2 AND L6
L26 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L28 SCR 2043
L30 489 SEA FILE=REGISTRY SUB=L8 SSS FUL L26 NOT L28

100.0% PROCESSED 5204 ITERATIONS

489 ANSWERS

SEARCH TIME: 00.00.01

=> file hca

FILE 'HCA' ENTERED AT 12:23:43 ON 01 AUG 2003

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L49 ANSWER 1 OF 6 HCA COPYRIGHT 2003 ACS on STN

138:322667 Preparation and characterization of novel methylsulfanyl-pyrazolopyrimidine and methylsulfanyl-pyrazolotriazine azo dyes. Elgemeie, Galal H.; Zahran, Magdy K.; Abbas, Emam M.; Abdel Mowla, Ebtissam A. (Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt). Pigment & Resin Technology, 31(5), 297-309 (English) 2002. CODEN: PGRTBC. ISSN: 0369-9420. OTHER SOURCES: CASREACT 138:322667. Publisher: Emerald.

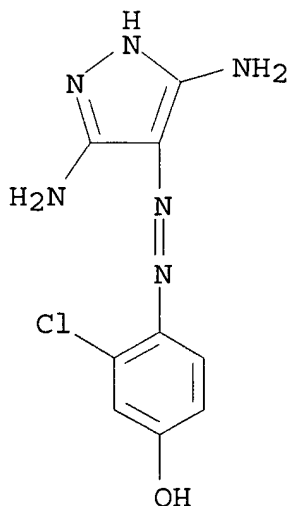
AB Thirty arylazopyrazolopyrimidine and -pyrazolotriazine amino derivs. (6 contg. a MeS group) were synthesized. Applications to nylon and polyester and characteristics of these azo dyes were demonstrated.

IT 536738-98-4

(starting material; prepn. and application of arylazopyrazolopyrimidine and -pyrazolotriazine amino deriv. dyes)

RN 536738-98-4 HCA

CN Phenol, 3-chloro-4-[(3,5-diamino-1H-pyrazol-4-yl)azo]- (9CI) (CA INDEX NAME)



CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and

Photographic Sensitizers)

Section cross-reference(s): 28, 40, 73

IT 3656-02-8 3656-03-9 3656-04-0 5147-80-8,
Bis(methylthio)methylenemalononitrile 6975-75-3 10191-60-3
13567-16-3 34933-41-0 40160-35-8 62679-04-3 393139-78-1
536721-19-4 536722-85-7 536723-08-7 **536738-98-4**
(starting material; prepn. and application of
arylazopyrazolopyrimidine and -pyrazolotriazine amino deriv.
dyes)

L49 ANSWER 2 OF 6 HCA COPYRIGHT 2003 ACS on STN

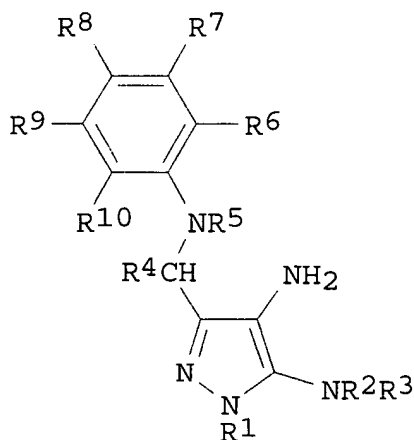
137:234003 Diaminopyrazole derivatives and hair dyes containing them.
Chassot, Laurent; Braun, Hans-Juergen (Wella Aktiengesellschaft,
Germany). PCT Int. Appl. WO 2002072556 A1 20020919, 54 pp.

DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR,
BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,
PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW:
AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB,
GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR.

(German). CODEN: PIXXD2. APPLICATION: WO 2001-EP12061 20011018.

PRIORITY: DE 2001-10111862 20010313.

GI



AB The invention relates to diaminopyrazole derivs. (I; R1 = alkyl, mono- or dihydroxyalkyl, alkoxyalkyl, Ph, optionally substituted benzyl; R2, R3 = H, mono- or dihydroxyalkyl, alkoxyalkyl, or R2R3 together with N may form a heterocyclic ring; R4 = H, alkyl; R5 = H, ,org. group; R6, R7, R8, R9, R10 = H, halogen, CN, OH, org. group) or their physiol. acceptable, water-sol. salts. The invention further relates to agents for the oxidative coloration of hair contg. I. In an example, the hydrochloride of 4-[[4,5-diamino-1-(2-

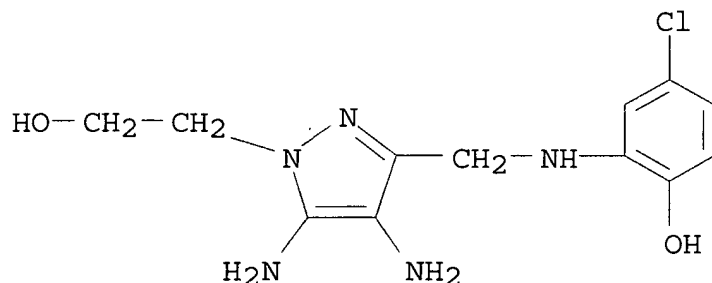
hydroxyethyl)-1H-pyrazol-3-ylmethyl]amino]phenol was prepd. as a developer for oxidative hair dyes.

IT 459839-57-7

(diaminopyrazole derivs. for oxidative hair dye developer components)

RN 459839-57-7 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-[[[5-chloro-2-hydroxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

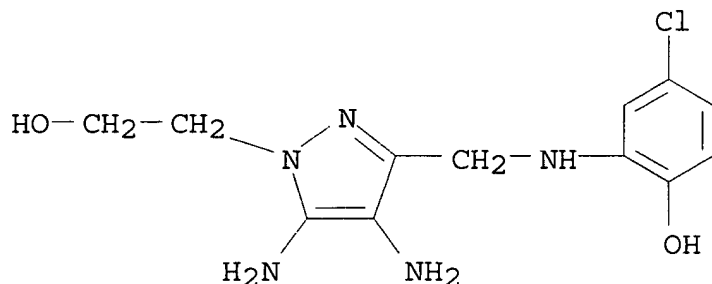


IT 459839-93-1P

(prodn. of diaminopyrazole derivs. for oxidative hair dye developer components)

RN 459839-93-1 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-[[[5-chloro-2-hydroxyphenyl)amino]methyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

IC ICM C07D231-38

ICS A61K007-13

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 28, 62

| | | | | | |
|----|-------------|--------------------|-------------|-------------|-------------|
| IT | 459839-46-4 | 459839-47-5 | 459839-48-6 | 459839-49-7 | 459839-50-0 |
| | 459839-51-1 | 459839-52-2 | 459839-53-3 | 459839-54-4 | 459839-55-5 |
| | 459839-56-6 | 459839-57-7 | 459839-58-8 | 459839-59-9 | |

459839-60-2 459839-61-3 459839-62-4 459839-63-5 459839-64-6
459839-65-7 459839-66-8 459839-67-9 459839-68-0 459839-69-1
459839-70-4 459839-71-5 459839-72-6 459839-73-7 459839-74-8

(diaminopyrazole derivs. for oxidative hair dye developer components)

IT 459839-82-8P 459839-83-9P 459839-84-0P 459839-85-1P
459839-86-2P 459839-87-3P 459839-88-4P 459839-89-5P
459839-90-8P 459839-91-9P 459839-92-0P **459839-93-1P**
459839-94-2P 459839-95-3P 459839-96-4P 459839-97-5P
459839-98-6P 459839-99-7P 459840-00-7P 459840-01-8P
459840-02-9P 459840-03-0P 459840-04-1P 459840-05-2P
459840-06-3P 459840-07-4P 459840-08-5P 459840-09-6P
459840-10-9P

(prodn. of diaminopyrazole derivs. for oxidative hair dye developer components)

L49 ANSWER 3 OF 6 HCA COPYRIGHT 2003 ACS on STN

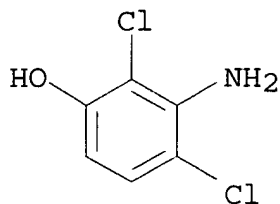
132:283911 **Coloring** agents with enzymes. Saettler, Andrea; Kleen, Astrid; Weiss, Albrecht; Rose, David (Henkel Kommanditgesellschaft auf Aktien, Germany). PCT Int. Appl. WO 2000021497 A1 20000420 47 pp. DESIGNATED STATES: W: AU, JP, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German). CODEN: PIXXD2. APPLICATION: WO 1999-EP7368 19991005. PRIORITY: DE 1998-19847276 19981014.

AB **Coloring** agents for **coloring** fibers contg. **keratin** contain .gtoreq.1 **dye** intermediate, a choline-based oxidase system, and .gtoreq.1 peroxidase, and are characterized by a good **coloring** action and gentleness on **hair**. Preferred **dye** intermediates include 5,6-dihydroxyindole and 5,6-dihydroxyindoline. Thus, a melt of cetearyl alc. 8.50, C12-18 fatty alcs. 2.00, and ceteareth-20 0.75 g was emulsified with a soln. of 27.5% Na laureth sulfate 20.00, 30% cocamidopropylbetaine 12.50, and H2O 30.00 g at 80.degree.. This cream base was mixed with 10 mL of an aq. soln. of 0.27 g 4-aminophenol (pH 7.0) and 10 mL of an aq. soln. of 0.31 g 5-amino-2-methylphenol (pH 7.0) and cooled to 30.degree.. Choline chloride (2.5 mL, 3.36 g/20 mL) was incubated with 2.5 mL aq. Alcaligenes choline oxidase soln. (33.2 U/mL) at pH 7 and 37.degree. for 30 min, and 4 mL of the incubation mixt. was mixed with 8 g of the **coloring** cream and 4 mL soybean peroxidase soln. (0.4 IU/mL). The mixt. was applied to graying **hair** for 10 min, followed by exposure to the air for 35 min, rinsing, and drying to produce an orange-gray **color**.

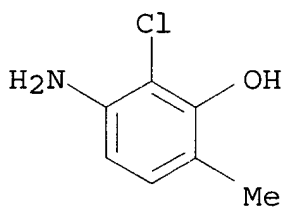
IT 61693-42-3, 2,4-Dichloro-3-aminophenol 84540-50-1,
2-Chloro-6-methyl-3-aminophenol 155601-17-5,
4,5-Diamino-1-(2-hydroxyethyl)pyrazole
(**coloring** agents with enzymes)

RN 61693-42-3 HCA

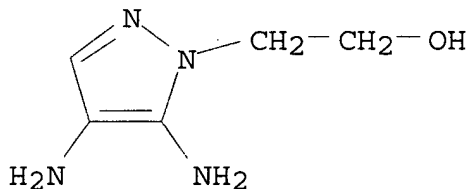
CN Phenol, 3-amino-2,4-dichloro- (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



RN 155601-17-5 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)

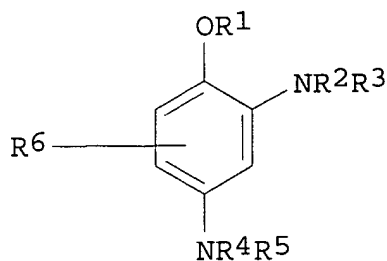


IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 41
 ST oxidative **hair dye** choline oxidase; peroxidase
 choline oxidase **hair dye**
 IT Alcaligenes
 Arthrobacter oxidans
 (choline oxidase of; **coloring** agents with enzymes)
 IT **Hair** preparations
 (**dyes**, oxidative; **coloring** agents with
 enzymes)
 IT Fungi
 Plant (Embryophyta)
 Soybean (Glycine max)
 (peroxidase of; **coloring** agents with enzymes)
 IT 67-48-1, Choline chloride 83-56-7, 1,5-Dihydroxynaphthalene
 90-15-3, 1-Naphthol 95-55-6, o-Aminophenol 95-70-5 95-88-5,
 4-Chlororesorcinol 106-50-3, p-Phenylenediamine, biological
 studies 108-46-3, Resorcinol, biological studies 123-30-8,

p-Aminophenol 488-87-9, 2,5-Dimethylresorcinol 504-15-4,
 5-Methylresorcinol 575-38-2, 1,7-Dihydroxynaphthalene 582-17-2,
 2,7-Dihydroxynaphthalene 591-27-5, m-Aminophenol 608-25-3,
 2-Methylresorcinol 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 2380-86-1,
 6-Hydroxyindole 2620-45-3, 3,4-Methylenedioxyaniline hydrochloride
 2835-95-2, 5-Amino-2-methylphenol 2835-99-6, 4-Amino-3-
 methylphenol 3131-52-0D, 5,6-Dihydroxyindole, derivs. 6201-65-6,
 2-Chlororesorcinol 6639-93-6, 6-Methyl-1,2,3,4-
 tetrahydroquinoxaline 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
 phenylenediamine 9003-99-0, Peroxidase 9028-67-5, Choline
 oxidase 14268-66-7, 3,4-Methylenedioxyaniline 16867-03-1,
 2-Amino-3-hydroxypyridine 22715-34-0, 2-Hydroxy-4,5,6-
 triaminopyrimidine 29539-03-5D, 5,6-Dihydroxyindoline, derivs.
 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate **61693-42-3**
 , 2,4-Dichloro-3-aminophenol 63969-46-0 66422-95-5,
 2,4-Diaminophenoxyethanol dihydrochloride 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1, 1,3-Bis(2,4-
 diaminophenoxy)propane tetrahydrochloride 79352-72-0,
 2-Aminomethyl-4-aminophenol 81892-72-0, 1,3-Bis(2,4-
 diaminophenoxy)propane 83732-72-3, 3-Amino-2-methylamino-6-
 methoxypyridine dihydrochloride 83763-47-7 **84540-50-1**,
 2-Chloro-6-methyl-3-aminophenol 85679-78-3, 2,6-Dimethoxy-3,5-
 diaminopyridine 90817-34-8, 3-Amino-2-methylamino-6-
 methoxypyridine 93841-24-8 110102-85-7, 2-Methyl-4-chloro-5-
 aminophenol hydrochloride 110102-86-8, 2-Methyl-4-chloro-5-
 aminophenol 135043-64-0, 2-Aminomethyl-4-aminophenol
 dihydrochloride 149330-25-6 **155601-17-5**,
 4,5-Diamino-1-(2-hydroxyethyl)pyrazole 159661-45-7,
 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane 251450-62-1
 (coloring agents with enzymes)

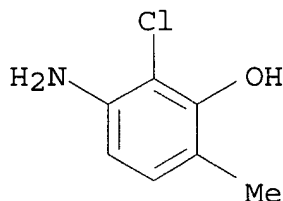
L49 ANSWER 4 OF 6 HCA COPYRIGHT 2003 ACS on STN

132:13105 Preparation of 2,4-diaminophenol-derivative oxidative
 dye intermediates and their use in hair
 dye formulations. Akram, Mustafa; Wolff, Wolfgang; Kleen,
 Astrid (Schwarzkopf G.m.b.H. Hans, Germany). Ger. Offen. DE
 19826457 A1 19991216, 10 pp. (German). CODEN: GWXXBX.
 APPLICATION: DE 1998-19826457 19980613.

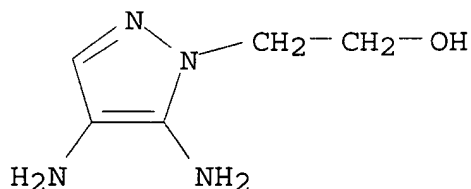


I

- AB The title compds. [I; R1 = (CH₂)_nX; n = 2-4; X = satd. or unsatd. arom. 6- or 7-member ring contg up to 2 O or S or up to 3 N atoms, etc.; R2-R5 = H, (di)hydroxyalkyl, trihydroxyalkyl, (un)substituted aminoalkyl, haloalkyl; R6 = H, Me, Et, hydroxyalkyl, halogen; such that .gtoreq.1 of R1-R5 = H], useful as the oxidative **dye** coupling component for **hair dye** formulations, are prepd. and I-contg. **hair dye** formulations presented. Thus, 1-chloro-2,4-dinitrobenzene was reacted with 2-(hydroxymethyl)tetrahydropyran in the presence of aq. NaOH, the intermediate 1-(tetrahydropyran-2-ylmethoxy)-2,4-dinitrobenzene hydrogenated to the corresponding diamine, and salified with HCl(g), producing gray powd. 1-(tetrahydropyran-2-ylmethoxy)-2,4-diaminobenzene dihydrochloride (m.p. 154.degree.).
- IT **84540-50-1**, 3-Amino-2-chloro-6-methylphenol
155601-17-5, 4,5-Diamino-1-(2-hydroxyethyl)pyrazole
 (developing component; prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- RN **84540-50-1** HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- RN **155601-17-5** HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)



- IC ICM C07D309-06
 ICS C07C217-82; C07C215-76; A61K007-13; D06P003-10
- CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 27, 62
- ST diaminophenol prepn **hair dye** intermediate;
 oxidative **dye** prepn diaminophenol deriv
- IT Phenols, preparation
 Phenols, preparation
 (amino, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenol-

- deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT **Hair** preparations
(**dyes**, oxidative, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT Amines, preparation
Amines, preparation
(phenolic, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT **Hair**
(prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT 83-56-7, 1,5-Dihydroxynaphthalene 90-15-3, 1-Naphthol 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chloro-1,3-dihydroxybenzene 106-50-3, 1,4-Benzenediamine, reactions 108-46-3, 1,3-Benzenediol, reactions 123-30-8, p-Aminophenol 488-87-9, 2,5-Dimethylresorcinol 504-15-4, 5-Methylresorcinol 575-38-2, 1,7-Dihydroxynaphthalene 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 608-25-3, 2-Methylresorcinol 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 2835-95-2, 5-Amino-2-methylphenol 2835-99-6, 4-Amino-3-methylphenol 6201-65-6, 2-Chlororesorcinol 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 63969-46-0 79352-72-0, 2-Aminomethyl-4-aminophenol **84540-50-1**, 3-Amino-2-chloro-6-methylphenol 93841-24-8, 2-(2,5-Diaminophenyl)ethanol **155601-17-5**, 4,5-Diamino-1-(2-hydroxyethyl)pyrazole 251450-62-1
(developing component; prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT 106774-37-2P 251457-86-0P
(prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT 97-00-7, 1-Chloro-2,4-dinitrobenzene 100-72-1, 2-(Hydroxymethyl)tetrahydropyran
(prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)
- IT 73839-69-7P
(prepn. of 2,4-diaminophenol-deriv. oxidative **dye** intermediates and their use in **hair dye** formulations)

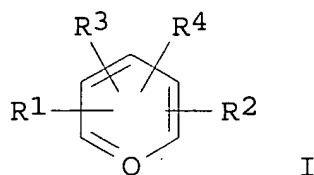
L49 ANSWER 5 OF 6 HCA COPYRIGHT 2003 ACS on STN

131:233386 **Hair dyes**. Braun, Hans-Juergen;

Semadeni, Pascal Andre (Wella A.-G., Germany). Ger. DE 19813937 C1
19990916, 38 pp. (German). CODEN: GWXXAW. APPLICATION: DE

1998-19813937 19980328.

GI

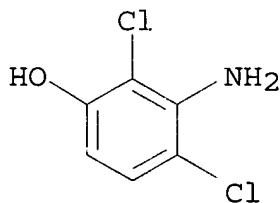


AB **Hair dyes** which provide an intense orange to red-brown color contain an oxidative developer-coupler combination based e.g. on p-phenylenediamines and m- or p-aminophenols in addn. to a nitrophenyl or nitropyridine direct **dye I** [Q = CH, N; R1 = NO2; R2 = H, NO2; R3 = H, NH2, CH(CN)CO2Et; R4 = 5-(2,2-dimethyl-4,6-dioxo-1,3-dioxanyl), CHR5R6; R5 = CN, CO2Et; R6 = CN, COMe, CONH2, CO2Et]. Thus, a **dye** compn. contg. Et cyano(2,4-dinitrophenyl)acetate (II) 1400, 5-amino-2-methylphenol 615, 1,4-diamino-2-methylbenzene 540 mg, 28% aq. Na lauryl alc. diglycol ether sulfate 10.0, EtOH 10.0, ascorbic acid 0.3, and demineralized water to 100.0 g was combined 1:1 with 6% aq. H2O2 and applied to the **hair** at 40.degree. for 30 min to confer a **color** which depended on the pH: aubergine-grenadine at pH 5, aubergine-chestnut at pH 7, and copper-brown at pH 8. II was prepd. by reaction of Et cyanoacetate with 2,4-dinitro-1-fluorobenzene and NaOEt.

IT **61693-42-3**, 3-Amino-2,4-dichlorophenol **84540-50-1**,
3-Amino-2-chloro-6-methylphenol **155601-17-5**,
4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole
(**hair dyes**)

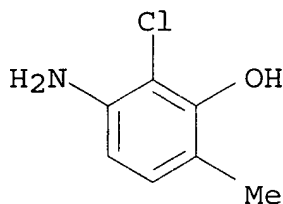
RN 61693-42-3 HCA

CN Phenol, 3-amino-2,4-dichloro- (9CI) (CA INDEX NAME)

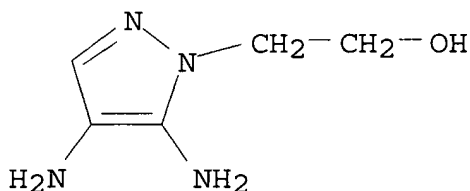


RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



RN 155601-17-5 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 ICS D06P001-32; D06P003-08
 ICA D06P003-14; D06P003-30
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 25, 27
 ST nitrophenyl direct **dye hair**; nitropyridine
 direct **dye** prepn **hair**
 IT **Hair** preparations
 (**dyes**, oxidative; **hair dyes**)
 IT **Hair** preparations
 (**dyes**; **hair dyes**)
 IT 83-56-7, 1,5-Dihydroxynaphthalene 89-25-8, 3-Methyl-1-phenyl-5-
 pyrazolone 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 90-15-3,
 1-Naphthol 95-55-6, 2-Aminophenol 95-70-5, 1,4-Diamino-2-
 methylbenzene 95-88-5, 1-Chloro-2,4-dihydroxybenzene 106-50-3,
 1,4-Benzenediamine, biological studies 108-46-3,
 1,3-Dihydroxybenzene, biological studies 141-86-6,
 2,6-Diaminopyridine 150-75-4, 4-Methylaminophenol 533-31-3,
 3,4-Methylenedioxyphenol 575-38-2, 1,7-Dihydroxynaphthalene
 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol
 608-25-3, 1,3-Dihydroxy-2-methylbenzene 1004-74-6,
 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 2,5,6-Triaminopyrimidin-
 4(1H)-one 2380-94-1, 4-Hydroxyindole 2835-95-2,
 5-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol
 2835-99-6, 4-Amino-3-methylphenol 5349-76-8, 2,4-Diamino-1-methoxy-
 5-methylbenzene 5697-02-9, 2-Methyl-1-naphthyl acetate
 6201-65-6, 2-Chloro-1,3-dihydroxybenzene 6941-70-4,
 6-Bromo-1-hydroxy-3,4-methylenedioxybenzene 7575-35-1,
 4-[Bis(2-hydroxyethyl)amino]aniline 16867-03-1,
 2-Amino-3-hydroxypyridine 26011-57-4, 6-Amino-3,4-dihydro-1,4(2H)-
 benzoxazine 26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)-benzoxazine

26455-21-0, N-(3-Dimethylaminophenyl)urea 28020-38-4,
2,3-Diamino-6-methoxypyridine 29785-47-5, 4-Amino-2-
(methoxymethyl)phenol 39489-79-7, 5-Amino-2,4-dichlorophenol
53222-92-7, 3-Amino-2-methylphenol 55302-96-0,
5-[(2-Hydroxyethyl)amino]-2-methylphenol **61693-42-3**,
3-Amino-2,4-dichlorophenol 66566-48-1, 4-[(2-
Methoxyethyl)amino]aniline 66583-79-7, 1,4-Diamino-2-(2-
hydroxyethoxy)benzene dihydrochloride 70643-19-5,
2,4-Diamino-1-(2-hydroxyethoxy)benzene 74918-21-1,
1,3-Bis(2,4-diaminophenoxy)propane tetrahydrochloride 79352-72-0,
4-Amino-2-(aminomethyl)phenol 81892-72-0, 1,3-Bis(2,4-
diaminophenoxy)propane 83763-47-7, 2-Amino-4-[(2-
hydroxyethyl)amino]anisole 83763-48-8 **84540-50-1**,
3-Amino-2-chloro-6-methylphenol 85679-78-3, 3,5-Diamino-2,6-
dimethoxypyridine 86817-42-7, 2-(4-Amino-2-hydroxyphenoxy)ethanol
90817-34-8, 3-Amino-6-methoxy-2-(methylamino)pyridine 93841-24-8,
1,4-Diamino-2-(2-hydroxyethyl)benzene 93841-25-9 94082-77-6,
2,4-Diamino-1,5-bis(2-hydroxyethoxy)benzene 97902-52-8,
1,4-Diamino-2-(1-methylethyl)benzene 104752-48-9,
4-[(3-Hydroxypropyl)amino]aniline 110952-46-0,
4-Amino-2-[(2-hydroxyethyl)amino]methylphenol 111451-24-2,
2,6-Diamino-3,5-dimethoxypyridine 122455-85-0,
5-Amino-4-fluoro-2-methylphenol 128729-30-6, 1,3-Bis[(4-
aminophenyl)(2-hydroxyethyl)amino]-2-propanol 135043-64-0,
4-Amino-2-(aminomethyl)phenol dihydrochloride 139443-57-5,
5-Amino-4-ethoxy-2-methylphenol 141614-05-3, 2,4-Diamino-1-(2-
hydroxyethoxy)-5-methylbenzene 141922-20-5, 2,4-Diamino-1-fluoro-5-
methylbenzene 155601-16-4, 4,5-Diamino-1-(1-methylethyl)-1H-
pyrazole **155601-17-5**, 4,5-Diamino-1-(2-hydroxyethyl)-1H-
pyrazole 157469-54-0, 4,5-Diamino-1-[(4-methylphenyl)methyl]-1H-
pyrazole 159661-45-7, 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane
244028-58-8, 2,4-Bis[(2-hydroxyethyl)amino]-1,5-dimethoxybenzene
244028-59-9, 5-[(2-Hydroxyethyl)amino]-1,3-benzodioxole

(hair dyes)

IT 4950-04-3P 10565-13-6P 60059-82-7P, Ethyl cyano(2,4-
dinitrophenyl)acetate 91090-86-7P 218964-81-9P, Ethyl
(5-amino-2,4-dinitrophenyl)cianoacetate 218964-82-0P
218964-83-1P 244028-51-1P 244028-52-2P 244028-53-3P
244028-54-4P 244028-55-5P 244028-56-6P

(hair dyes)

IT 70-34-8, 2,4-Dinitro-1-fluorobenzene 100-00-5,
4-Nitrochlorobenzene 105-53-3, Diethyl malonate 105-56-6, Ethyl
cyanoacetate 109-77-3, Malonic acid dinitrile 141-97-9, Ethyl
acetoacetate 327-92-4, 2,4-Dinitro-1,5-difluorobenzene 367-81-7,
2,4-Dinitro-5-fluoroaniline 2033-24-1, Meldrum's acid 2578-45-2,
2-Chloro-3,5-dinitropyridine 4548-45-2, 2-Chloro-5-nitropyridine
5470-18-8, 2-Chloro-3-nitropyridine

(hair dyes)

L49 ANSWER 6 OF 6 HCA COPYRIGHT 2003 ACS on STN

130:227508 Oxidative hair dye compositions

containing pyrazole derivatives and meta-aminophenol derivatives.

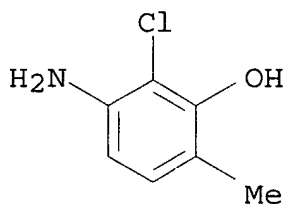
Applicant - parent

Maubru, Mireille; Audousset, Marie-Pascale (L'Oreal, Fr.). PCT Int. Appl. WO 9911231 A1 19990311, 39 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION: WO 1998-FR1591 19980720. PRIORITY: FR 1997-10857 19970901.

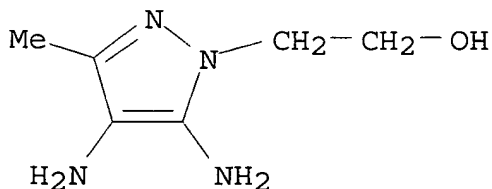
AB An oxidn. **dyeing** compn. for **keratin** fibers, in particular human **keratin** fibers such as **hair**, comprises at least an oxidn. base selected among diamino pyrazoles and triamino pyrazoles, combined with at least a meta-aminophenol halogenated in the phenol ortho as coupler, and the **dyeing** method using said compn. with an oxidizing agent. A **hair dye** compn. contained 4,5-diamino-1-ethyl-3-methylpyrazole 0.639, 3-amino-6-chlorophenol 0.431, excipients and water q.s. 100 g.

IT 84540-50-1 132026-22-3 132026-41-6
184172-94-9 184172-95-0 184172-96-1
(oxidative **hair dye** compns. contg. pyrazole derivs. and meta-aminophenol derivs.)

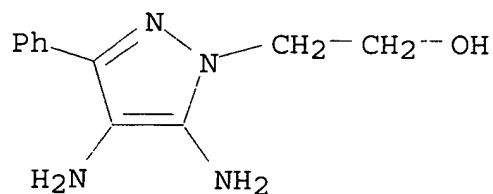
RN 84540-50-1 HCA
CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



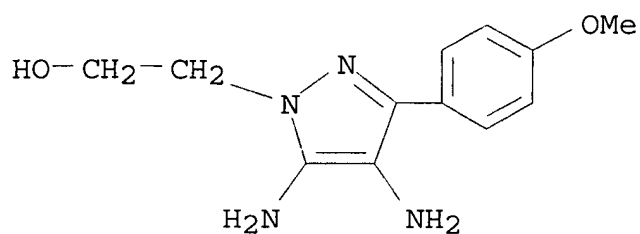
RN 132026-22-3 HCA
CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-methyl- (9CI) (CA INDEX NAME)



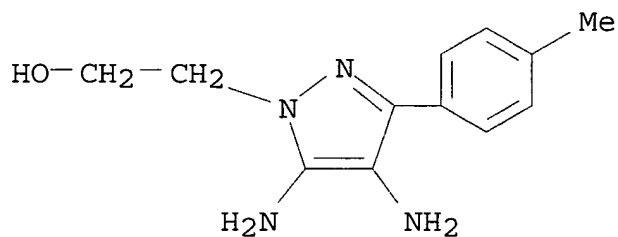
RN 132026-41-6 HCA
CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-phenyl- (9CI) (CA INDEX NAME)



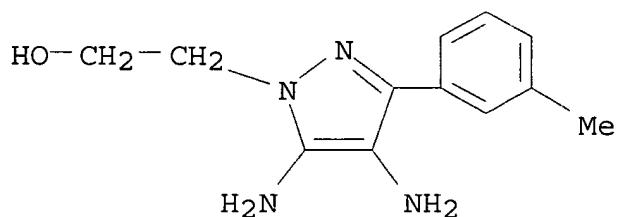
RN 184172-94-9 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-(4-methoxyphenyl)- (9CI) (CA
 INDEX NAME)



RN 184172-95-0 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-(4-methylphenyl)- (9CI) (CA
 INDEX NAME)



RN 184172-96-1 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino-3-(3-methylphenyl)- (9CI) (CA
 INDEX NAME)



IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** pyrazole metaaminophenol

deriv

IT Alcohols, biological studies
(C1-4; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT Bromates
(alkali metal salts; oxidative **hair dye**
compns. contg. pyrazole derivs. and meta-aminophenol derivs.)

IT Alcohols, biological studies
(aralkyl; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT **Hair** preparations
(creams; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT **Hair** preparations
(**dyes**, oxidative; oxidative **hair dye**
compns. contg. pyrazole derivs. and meta-aminophenol derivs.)

IT Glycols, biological studies
(ethers; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT **Hair** preparations
(gels; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT Ethers, biological studies
(glycol; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT Salts, biological studies
(of peroxy acids; oxidative **hair dye** compns.
contg. pyrazole derivs. and meta-aminophenol derivs.)

IT Solvents
(org.; oxidative **hair dye** compns. contg.
pyrazole derivs. and meta-aminophenol derivs.)

IT Glycols, biological studies
Peroxy acids
Peroxysulfates
(oxidative **hair dye** compns. contg. pyrazole
derivs. and meta-aminophenol derivs.)

IT Group IIIA element compounds
(perborates; oxidative **hair dye** compns.
contg. pyrazole derivs. and meta-aminophenol derivs.)

IT 56-81-5, 1,2,3-Propanetriol, biological studies 124-43-6
6358-06-1, 3-Amino-6-chlorophenol 7722-84-1, Hydrogen peroxide
(H2O2), biological studies 16461-98-6, 1H-Pyrazole-3,4-diamine
21616-59-1 45514-38-3 52943-88-1 55120-56-4 57047-11-7
63536-19-6 76492-69-8 76492-70-1 78467-10-4 78467-17-1
84540-50-1 89868-34-8 96886-30-5 103245-13-2
103245-14-3 103245-15-4 103245-16-5 103245-17-6 103245-18-7
103245-19-8 103245-23-4 118020-67-0, 1H-Pyrazole-3,4,5-triamine
122128-84-1 131311-65-4 131311-66-5 132026-21-2
132026-22-3 **132026-41-6** 132026-42-7
132026-43-8 132026-44-9 132026-45-0 132026-72-3 132026-73-4
132026-83-6 148777-81-5 148777-82-6 153990-62-6 153990-63-7
153990-64-8 153990-65-9 153990-66-0 153990-67-1 153990-68-2

| | | | | |
|--------------------|-------------|--------------------|--------------------|-------------|
| 153990-69-3 | 153990-70-6 | 153990-71-7 | 155601-18-6 | 155601-24-4 |
| 157469-53-9 | 157469-54-0 | 157469-55-1 | 157469-56-2 | 157469-57-3 |
| 157469-58-4 | 184172-85-8 | 184172-94-9 | 184172-95-0 | |
| 184172-96-1 | 184172-97-2 | 184172-98-3 | 184172-99-4 | |
| 184173-00-0 | 184173-01-1 | 184173-02-2 | 184173-03-3 | 184173-04-4 |
| 184173-05-5 | 184173-06-6 | 184173-07-7 | 184173-08-8 | 184173-09-9 |
| 184173-10-2 | 184173-11-3 | 184173-12-4 | 184173-13-5 | 184173-14-6 |
| 184173-15-7 | 184173-16-8 | 184173-17-9 | 184173-18-0 | 184173-19-1 |
| 184173-20-4 | 184173-21-5 | 184173-22-6 | 184173-23-7 | 184173-24-8 |
| 184173-25-9 | 184173-26-0 | 184173-27-1 | 184173-28-2 | 184173-29-3 |
| 184173-30-6 | 184173-31-7 | 184173-32-8 | 184173-33-9 | 184173-34-0 |
| 184173-35-1 | 184173-36-2 | 184173-37-3 | 184173-38-4 | 184173-39-5 |
| 184173-40-8 | 184173-41-9 | 184173-42-0 | 184173-43-1 | 184173-45-3 |
| 184173-46-4 | 184173-47-5 | 184173-48-6 | 191731-07-4 | 191731-08-5 |
| 221110-59-4 | 221129-68-6 | 221129-69-7 | | |

(oxidative **hair dye** compns. contg. pyrazole
derivs. and meta-aminophenol derivs.)

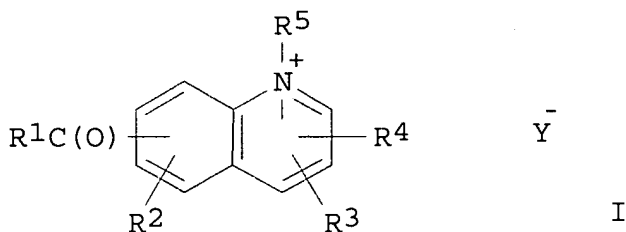
=> d 150 1-22 cbib abs hitstr hitind

L50 ANSWER 1 OF 22 HCA COPYRIGHT 2003 ACS on STN

133:79001 Quinolinium aldehydes and ketones for **coloring**

keratin-containing fibers. Moeller, Hinrich; Oberkobusch,
Doris; Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE
19859750 A1 20000629, 13 pp. (German). CODEN: GWXXBX.
APPLICATION: DE 1998-19859750-19981223.

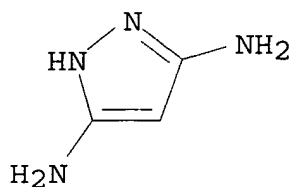
GI



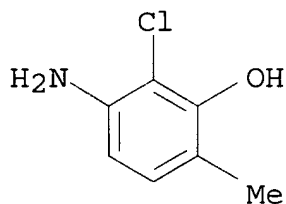
AB **Keratin** fibers, esp. human **hair**, are
dyed yellow, orange, or brown with a quinolinium aldehyde or
ketone [I; R1 = H, C1-4 alkyl, aryl, heteroaryl; R2-R4 = H, halo,
alkyl, alkoxy, hydroxyalkoxy, OH, NO2, (substituted) amino, C1-4
acyl; or any 2 residues of R2-R4 may complete a condensed benzene
ring; R5 = C1-4 alkyl or alkenyl, aryl, aralkyl, heteroaryl; Y- =
halide, benzenesulfonate, BF4-, p-toluenesulfonate,
methanesulfonate, trifluoromethanesulfonate, ClO4-, SO42-, HSO4-,
ZnCl42-, N-heterocycle N-oxide]. For a greater range of
colors, I are combined with .gtoreq.1 primary or secondary
aliph. or arom. amine or alc., N heterocycle, amino acid,
oligopeptide, arom. OH compd., or CH-active compd. These

combinations can be used with or without the addn. of oxidizing agents to produce **colors** of exceptional brilliance and depth. Thus, a soln. contg. 7-formyl-1-methylquinolinium trifluoromethanesulfonate 5, 2,5-diaminotoluene sulfate 5, NaOAc 5 mmol, and 1 drop of 20% fatty alkyl ether sulfate in 50 mL H₂O (pH 6) was applied to gray **hair** for 30 min at 30.degree. to produce a dark orange-brown **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
6-Methyl-3-amino-2-chlorophenol
(quinolinium aldehydes and ketones for **coloring**
keratin-contg. fibers)
RN 16082-33-0 HCA
CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA
CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
CC 62-3 (Essential Oils and Cosmetics)
ST **hair dye** quinolinium aldehyde amine; alc
quinolinium ketone **hair dye**
IT Amines, biological studies
(aliph.; quinolinium aldehydes and ketones for **coloring**
keratin-contg. fibers)
IT Amines, biological studies
Nitriles, biological studies
(arom.; quinolinium aldehydes and ketones for **coloring**
keratin-contg. fibers)
IT Hydroxy compounds
(aryl; quinolinium aldehydes and ketones for **coloring**
keratin-contg. fibers)
IT **Hair** preparations
(**dyes**; quinolinium aldehydes and ketones for
coloring keratin-contg. fibers)
IT Heterocyclic compounds

- (nitrogen; quinolinium aldehydes and ketones for **coloring keratin**-contg. fibers)
- IT Amines, biological studies
(primary; quinolinium aldehydes and ketones for **coloring keratin**-contg. fibers)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(quinolinium aldehydes and ketones for **coloring keratin**-contg. fibers)
- IT Amines, biological studies
(secondary; quinolinium aldehydes and ketones for **coloring keratin**-contg. fibers)
- IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 91-22-5D,
Quinoline, quaternary salts, derivs., biological studies 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,
biological studies 95-55-6, 2-Aminophenol 95-70-5,
2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline,
biological studies 101-77-9, 4,4'-Diaminodiphenylmethane
101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9,
3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine,
biological studies 108-45-2, m-Phenylenediamine, biological
studies 108-46-3, Resorcinol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7,
1,3,3-Trimethyl-2-methyleneindoline 118-70-7, 4,5,6-
Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-80-9, Pyrocatechol, biological studies
121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9,
Hydroquinone, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic
acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol
150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline

580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-08-2, 3-Indoxyl acetate
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-
Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline 636-25-9,
2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole
1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole
1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 2871-01-4, 2-Nitro-4-amino-1-(2-
hydroxyethylamino)benzene 3131-52-0, 5,6-Dihydroxyindole
3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5,
6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole
4318-76-7, 2,5-Diaminopyridine 4331-29-7, 7-Aminobenzimidazole
4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2,
2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-
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5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-
indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2,
Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
6201-65-6, 2-Chlororesorcinol 6259-50-3, 6-Dimethylamino-4-hydroxy-
2-naphthalenesulfonic acid 6358-09-4 6399-72-0,
6-Amino-7-hydroxynaphthalene-2-sulfonic acid 6628-04-2,
4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7169-34-8,
Coumaranone 7336-20-1 7411-49-6 7575-35-1,
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2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxylaniline 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
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phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine
23244-87-3, 2,4,5-Triaminopyridine 23894-07-7,
3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2,
N,N-Bis[2-(4-aminophenoxy)ethyl]methylamine trihydrochloride
28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,
5,6-Dihydroxyindoline 34572-45-7, 2-Nitro-1-amino-4-[bis(2-
hydroxyethyl)amino]benzene 41927-50-8 46791-37-1D, salts
50610-28-1 53666-79-8 55302-96-0, 2-Methyl-5-(2-
hydroxyethylamino)phenol 56216-28-5, 3,5-Diamino-2,6-

dimethoxypyridine dihydrochloride 60320-10-7 61224-35-9
61693-42-3, 3-Amino-2,4-dichlorophenol 62496-02-0,
2-Methylamino-4,5,6-triaminopyrimidine 66635-40-3,
4,4'-Diaminostilbene dihydrochloride 70643-19-5 74918-21-1,
1,3-Bis(2,4-diaminophenoxy)propane tetrahydrochloride 79352-72-0,
4-Amino-2-aminomethylphenol 83732-72-3, 2-Methylamino-3-amino-6-
methoxypyridine dihydrochloride 83763-48-8 84540-47-6,
2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**,
6-Methyl-3-amino-2-chlorophenol 85679-78-3, 3,5-Diamino-2,6-
dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7,
4-Amino-2-hydroxymethylphenol 110102-86-8, 2-Methyl-5-amino-4-
chlorophenol 114402-54-9, 1,3-Bis(4-aminophenylamino)propane
115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 117907-43-4,
4-Amino-2-nitrodiphenylamine-2'-carboxylic acid 126335-41-9,
2,5-Diaminophenetole 128729-30-6 130582-56-8,
1,3-Bis(4-aminophenylamino)-2-propanol 135043-64-0,
2-Aminomethyl-4-aminophenol dihydrochloride 137290-86-9,
5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol 144644-13-3
159661-42-4, 2,5-Dihydroxy-4-morpholinoaniline 177080-42-1,
2-Amino-4-(2-hydroxyethylamino)phenol 202525-71-1 202525-73-3,
2,4,5-Triaminophenol trihydrochloride 202525-76-6,
2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7
202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9
215377-52-9, 3,4-Methylenediaminoaniline 220118-56-9
223383-77-5, 4-Amino-3-hydroxynaphthalenesulfonic acid
260981-02-0, N-(2-Methoxyethyl)-p-phenylenediamine 260981-03-1,
2,3-Dichloro-p-phenylenediamine 278807-62-8D, salts
278807-63-9D, salts 278807-64-0D, salts 278807-65-1D, salts
278807-66-2D, salts 278807-67-3D, salts 278807-68-4D, salts
278807-69-5D, salts 278807-70-8D, salts 278807-71-9D, salts
278807-72-0D, salts 278807-73-1D, salts 278807-74-2D, salts
278807-75-3D, salts 278807-76-4D, salts 278807-77-5D, salts
278807-78-6D, salts 278807-79-7D, salts 278807-80-0D, salts
278807-81-1D, salts

(quinolinium aldehydes and ketones for coloring
keratin-contg. fibers)

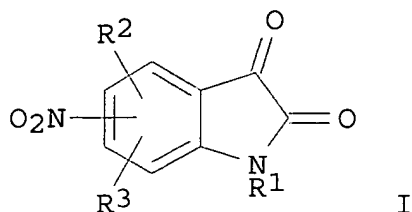
L50 ANSWER 2 OF 22 HCA COPYRIGHT 2003 ACS on STN

133:79000 Nitroisatins for coloring keratin

-containing fibers. Moeller, Hinrich; Oberkobusch, Doris; Hoeffkes,
Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19859723 A1
20000629, 13 pp. (German). CODEN: GWXXBX. APPLICATION: DE
1998-19859723 19981223.

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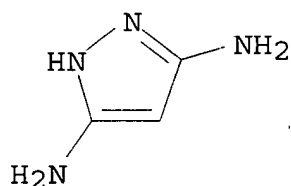


AB **Keratin** fibers, esp. human **hair**, are **dyed** with a combination of (a) a nitroisatin [I; R1 = H, alkyl, alkenyl, alkoxy, hydroxyalkyl, (substituted) aminoalkyl, (substituted) arylalkyl; R2, R3 = H, halo, alkyl, alkenyl, alkoxy, hydroxyalkyl, OH, CO2H, SO3H, NO2, (substituted) amino, acyl; or any 2 residues of R1-R3 may complete a condensed arom. ring] with (b) .gtoreq.1 primary or secondary aliph. or arom. amine or alc., N heterocycle, amino acid, oligopeptide, arom. OH compd., or CH-active compd. These combinations can be used with or without the addn. of oxidizing agents to produce **colors** of exceptional brilliance and depth. Thus, a soln. contg. 5-nitroisatin 5, 2,5-diaminotoluene sulfate 5, NaOAc 5 mmol, and 1 drop of 20% fatty alkyl ether sulfate in 50 mL H2O (pH 6) was applied to gray **hair** for 30 min at 30.degree. to produce a violet-black **color**.

IT ✓ 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
 ✓ 6-Methyl-3-amino-2-chlorophenol
 (nitroisatins for **coloring keratin**-contg. fibers)

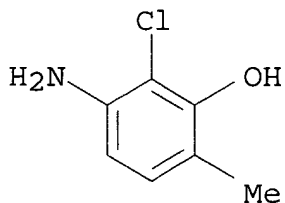
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST **hair dye** nitroisatin nucleophile; amine
 nitroisatin **hair dye**; alc nitroisatin
hair dye
 IT Amines, biological studies
 (aliph.; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT Amines, biological studies
 Nitriles, biological studies
 (arom.; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT Hydroxy compounds
 (aryl; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT **Hair** preparations
 (**dyes**; nitroisatins for **coloring**
keratin-contg. fibers)
 IT Heterocyclic compounds
 (nitrogen; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT Amino acids, biological studies
 Peptides, biological studies
 Phenols, biological studies
 (nitroisatins for **coloring keratin**-contg.
 fibers)
 IT Amines, biological studies
 (primary; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT Amines, biological studies
 (secondary; nitroisatins for **coloring keratin**
 -contg. fibers)
 IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
 Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,
 biological studies 95-55-6, 2-Aminophenol 95-70-5,
 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
 99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline,
 biological studies 101-77-9, 4,4'-Diaminodiphenylmethane
 101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9,
 3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine,
 biological studies 108-45-2, m-Phenylenediamine, biological
 studies 108-46-3, Resorcinol, biological studies 108-72-5,

1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7,
1,3,3-Trimethyl-2-methyleneindoline 118-70-7, 4,5,6-
Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-80-9, Pyrocatechol, biological studies
121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9,
Hydroquinone, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic
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150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-08-2, 3-Indoxyl acetate
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-09-6, 5-Nitroisatin
611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6, 3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline
636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0,
3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-
aminophenol 2835-99-6, 3-Methyl-4-aminophenol 2871-01-4,
2-Nitro-4-amino-1-(2-hydroxyethylamino)benzene 3131-52-0,
5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid
3167-49-5, 6-Aminonicotinic acid 3433-54-3 3484-32-0
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 7-Aminobenzimidazole 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2,
2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-
Tetraaminobenzophenone 5131-58-8 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
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indolium iodide 5434-20-8, 3-Aminophthalic acid 5453-79-2,
5,7-Dinitroisatin 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, .

3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol
6259-50-3, 6-Dimethylamino-4-hydroxy-2-naphthalenesulfonic acid
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7169-34-8, Coumaranone 7336-20-1 7411-49-6 7575-35-1,
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2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline **16082-33-0**,
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28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,
5,6-Dihydroxyindoline 34572-45-7, 2-Nitro-1-amino-4-[bis(2-
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5-Bromo-7-nitroisatin 50610-28-1 53666-79-8 53760-27-3,
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dimethylpyridine **84540-50-1**, 6-Methyl-3-amino-2-
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202525-71-1 202525-73-3, 2,4,5-Triaminophenol trihydrochloride
202525-76-6, 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7
202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9
215377-52-9, 3,4-Methylenediaminoaniline 220118-56-9
223383-77-5, 4-Amino-3-hydroxynaphthalenesulfonic acid
260981-02-0, N-(2-Methoxyethyl)-p-phenylenediamine 260981-03-1,
2,3-Dichloro-p-phenylenediamine 278803-50-2 278803-51-3
(nitroisatins for coloring keratin-contg.
fibers)

L50 ANSWER 3 OF 22 HCA COPYRIGHT 2003 ACS on STN

133:78999 Procedure for **coloring keratin**-containing

fibers using 2-oxo carboxylic acid derivatives in combination with nucleophiles. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19859722 A1 20000629, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1998-19859722 19981223.

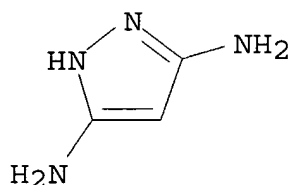
AB **Keratin** fibers, esp. human **hair**, are **dyed** with a combination of (a) 2-oxo carboxylic acid derivs. $R_1C(O)C(O)X$ [$R_1 = H$, C1-4 alkyl, CO_2H , (substituted) $PhCH_2$, (substituted) aryl, (substituted) heteroaryl; $X = O-$, OH , C1-4 alkoxy, NR_2R_3 ; $R_2, R_3 = H$, C1-4 alkyl, C2-4 hydroxyalkyl; or $R_2NR_3 =$ heterocycle] with (b) .gtoreq.1 primary or secondary aliph. or arom. amine, N heterocycle, oligopeptide, arom. OH compd., or CH-active compd. These combinations can be used with or without the addn. of oxidizing agents to produce **colors** of exceptional brilliance and depth. Thus, a soln. contg. Na pyruvate 10, 4,4'-diaminodiphenylamine sulfate 10, NaOAc 10 mmol, and 1 drop of 20% fatty alkyl ether sulfate in 100 mL H_2O (pH 6) was applied to gray **hair** for 30 min at 30.degree. to produce a blue-black **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
6-Methyl-3-amino-2-chlorophenol

(procedure for **coloring keratin**-contg. fibers
using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)

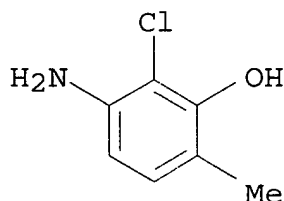
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST **hair dye** oxo carboxylate nucleophile

- IT Amines, biological studies
(aliph.; procedure for **coloring keratin**
-contg. fibers using 2-oxo carboxylic acid derivs. in combination
with nucleophiles)
- IT Amines, biological studies
Nitriles, biological studies
(arom.; procedure for **coloring keratin**-contg.
fibers using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)
- IT Hydroxy compounds
(aryl; procedure for **coloring keratin**-contg.
fibers using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)
- IT **Hair** preparations
(**dyes**; procedure for **coloring keratin**
-contg. fibers using 2-oxo carboxylic acid derivs. in combination
with nucleophiles)
- IT Heterocyclic compounds
(nitrogen; procedure for **coloring keratin**
-contg. fibers using 2-oxo carboxylic acid derivs. in combination
with nucleophiles)
- IT Carboxylic acids, biological studies
(oxo; procedure for **coloring keratin**-contg.
fibers using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)
- IT Amines, biological studies
(primary; procedure for **coloring keratin**
-contg. fibers using 2-oxo carboxylic acid derivs. in combination
with nucleophiles)
- IT Nucleophiles
(procedure for **coloring keratin**-contg. fibers
using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)
- IT Peptides, biological studies
Phenols, biological studies
(procedure for **coloring keratin**-contg. fibers
using 2-oxo carboxylic acid derivs. in combination with
nucleophiles)
- IT Amines, biological studies
(secondary; procedure for **coloring keratin**
-contg. fibers using 2-oxo carboxylic acid derivs. in combination
with nucleophiles)
- IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,
biological studies 95-55-6, 2-Aminophenol 95-70-5,

2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline,
biological studies 101-77-9 101-80-4 102-32-9,
3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine,
biological studies 108-45-2, m-Phenylenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 113-24-6, Sodium
pyruvate 114-76-1, Sodium phenylpyruvate 118-70-7,
4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-80-9, 1,2-Benzenediol, biological studies
121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9,
1,4-Benzenediol, biological studies 127-17-3, Pyruvic acid,
biological studies 127-17-3D, Pyruvic acid, alkyl esters
139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine
141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological
studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol
150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol
156-06-9, Phenylpyruvic acid 156-06-9D, Phenylpyruvic acid, alkyl
esters 156-81-0, 2,4-Diaminopyrimidine 298-12-4, Glyoxylic acid
298-12-4D, Glyoxylic acid, alkyl esters 452-58-4,
2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 473-90-5,
Mesoxalic acid 473-90-5D, Mesoxalic acid, alkyl esters 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic
acid 611-73-4, Phenylglyoxylic acid 611-73-4D, Phenylglyoxylic
acid, alkyl esters 611-98-3, 4,4'-Diaminobenzophenone 615-50-9
615-66-7, 2-Chloro-p-phenylenediamine 615-71-4,
1,2,4-Triaminobenzene 619-05-6, 3,4-Diaminobenzoic acid
623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol
876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6,
2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6,
5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1467-70-5, 2-Furylglyoxylic
acid 1477-49-2, 3-Indolylglyoxylic acid 1477-49-2D,
3-Indolylglyoxylic acid, alkyl esters 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium

p-toluenesulfonate 2706-75-4, Sodium glyoxylate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-
aminophenol 2835-99-6, 3-Methyl-4-aminophenol 2871-01-4,
2-Nitro-4-amino-1-(2-hydroxyethylamino)benzene 2990-19-4, Calcium
glyoxylate 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4151-33-1, Potassium pyruvate
4318-76-7, 2,5-Diaminopyridine 4331-29-7, 7-Aminobenzimidazole
4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2,
2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-
Tetraaminobenzophenone 5131-58-8 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5418-63-3 5434-20-8,
3-Aminophthalic acid 5548-10-7 5718-83-2, Rhodanine-3-acetic
acid 5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6,
2-Chlororesorcinol 6259-50-3, 6-Dimethylamino-4-hydroxy-2-
naphthalenesulfonic acid 6358-09-4 6399-72-0,
6-Amino-7-hydroxynaphthalene-2-sulfonic acid 6628-04-2,
4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7099-91-4,
4-Methoxyphenylglyoxylic acid 7099-91-4D, 4-Methoxyphenylglyoxylic
acid, alkyl esters 7169-34-8, Coumaranone 7336-20-1 7346-13-6
7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine
7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 14922-36-2,
4-Nitrophenylglyoxylic acid 14922-36-2D, 4-Nitrophenylglyoxylic
acid, alkyl esters 16082-33-0, 3,5-Diaminopyrazole
16867-03-1, 2-Amino-3-hydroxypyridine 17392-16-4,
2-Hydroxyphenylglyoxylic acid 17392-16-4D, 2-
Hydroxyphenylglyoxylic acid, alkyl esters 17647-93-7, Potassium
phenylpyruvate 19335-11-6, 5-Aminoindazole 20103-09-7,
2,5-Dichloro-p-phenylenediamine 21085-60-9, Calcium mesoxalate
22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
2,4,5-Triaminopyridine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2, N,N-Bis[2-(4-
aminophenoxy)ethyl]methanamine trihydrochloride 28020-38-4,
2,3-Diamino-6-methoxypyridine 29095-44-1 29539-03-5,
5,6-Dihydroxyindoline 34572-45-7, 2-Nitro-1-amino-4-[bis(2-
hydroxyethyl)amino]benzene 41927-50-8 43165-51-1, Sodium
phenylglyoxylate 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
50610-28-1 52009-14-0, Calcium pyruvate 52009-50-4, Calcium
phenylglyoxylate 53666-79-8 53760-27-3, 4,4'-
Diaminodiphenylamine sulfate 54381-16-7 54865-40-6, Calcium
phenylpyruvate 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol
56216-28-5, 3,5-Diamino-2,6-dimethoxypyridine dihydrochloride
58645-34-4, Potassium glyoxylate 61693-42-3, 3-Amino-2,4-
dichlorophenol 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine
63468-90-6 66635-40-3, 4,4'-Diaminostilbene dihydrochloride
70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1,
1,3-Bis(2,4-diaminophenoxy)propane tetrahydrochloride 79352-72-0,
4-Amino-2-aminomethylphenol 83732-72-3, 2-Methylamino-3-amino-6-

methoxypyridine dihydrochloride 84522-17-8 84540-47-6,
 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**,
 6-Methyl-3-amino-2-chlorophenol 85679-78-3, 3,5-Diamino-2,6-
 dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
 3-Amino-2-methylamino-6-methoxypyridine 91092-89-6 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 95153-90-5 103858-66-8
 104333-09-7, 4-Amino-2-hydroxymethylphenol 110102-86-8,
 2-Methyl-5-amino-4-chlorophenol 114402-54-9, 1,3-Bis(4-
 aminophenylamino)propane 115423-86-4, 1,3-Diamino-2,4-
 dimethoxybenzene 117907-43-4, 4-Amino-2-nitrodiphenylamine-2'-
 carboxylic acid 119301-82-5 126335-41-9, 2,5-Diaminophenetole
 128729-30-6 130582-56-8, 1,3-Bis(4-aminophenylamino)-2-propanol
 135043-64-0, 2-Aminomethyl-4-aminophenol dihydrochloride
 137290-86-9, 5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol
 144644-13-3 159661-42-4, 2,5-Dihydroxy-4-morpholinoaniline
 177080-42-1, 2-Amino-4-(2-hydroxyethylamino)phenol 198897-92-6
 202525-71-1 202525-73-3, 2,4,5-Triaminophenol trihydrochloride
 202525-76-6, 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7
 202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9
 215377-52-9, 3,4-Methylenediaminoaniline 223383-77-5,
 4-Amino-3-hydroxynaphthalenesulfonic acid 223422-05-7
 260981-02-0, N-(2-Methoxyethyl)-p-phenylenediamine 260981-03-1,
 2,3-Dichloro-p-phenylenediamine 278799-23-8 278799-24-9
 278799-25-0 278799-26-1 278799-27-2 278799-28-3

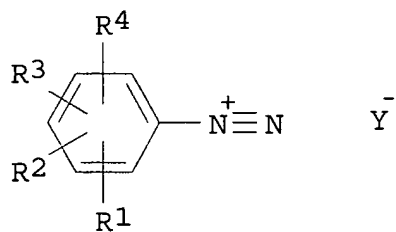
(procedure for **coloring keratin**-contg. fibers
 using 2-oxo carboxylic acid derivs. in combination with
 nucleophiles)

IT 278799-29-4 278799-30-7 278799-31-8 278799-33-0 278799-34-1
 (procedure for **coloring keratin**-contg. fibers
 using 2-oxo carboxylic acid derivs. in combination with
 nucleophiles)

L50 ANSWER 4 OF 22 HCA COPYRIGHT 2003 ACS on STN
 132:227153 Procedure for **coloring keratin**-containing
 fibers using stable diazonium salts. Moeller, Hinrich; Hoeffkes,
 Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19842071 A1
 20000316, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE
 1998-19842071 19980915.

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bad date

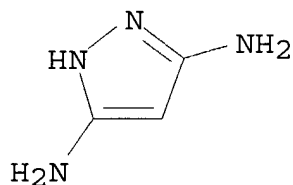


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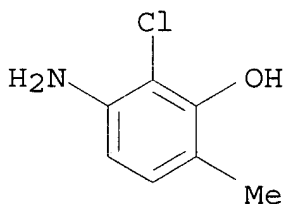
AB Stable diazonium salts I [R1-R4 = H, C1-4 alkyl, C1-4 alkoxy,

hydroxy-C1-4-alkoxy, OH, SO₃H, CO₂H. (substituted) amino, C1-4 acyl; 2 of R1-R4 may together form a condensed benzene or N-heterocyclic ring; Y = anion], optionally combined with primary or secondary amines, N-heterocyclic compds., arom. hydroxy compds., and/or active CH compds., are direct 1-step **hair dyes** which provide an exceptional brilliance and depth of **color** at least comparable with those obtainable with oxidative **dyes**. They may be used in the presence or absence of oxidizing agents. Thus, a slurry of 10 mmol 2,5-dimethoxy-4-benzoylamino phenyldiazonium chloride, 10 mmol 2,5-diaminotoluene sulfate, 10 mmol NaOAc, and 1 drop 20% fatty alkyl ether sulfate soln. in 100 mL H₂O was heated briefly to 80.degree., cooled, filtered, adjusted to pH 6.0, and the soln. was applied to gray **hair** at 30.degree. for 30 min to impart a medium-brown **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
6-Methyl-3-amino-2-chlorophenol
(procedure for **coloring keratin**-contg. fibers
using stable diazonium salts)
RN 16082-33-0 HCA
CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA
CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
ICS D06P003-04; D06P003-14
CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 41
ST diazonium salt **hair dye**; benzenediazonium salt
hair dye
IT Nitriles, biological studies
(arom.; procedure for **coloring keratin**-contg.
fibers using stable diazonium salts)
IT **Hair** preparations

- (**dyes**; procedure for **coloring keratin**
-contg. fibers using stable diazonium salts)
- IT Heterocyclic compounds
(nitrogen; procedure for **coloring keratin**
-contg. fibers using stable diazonium salts)
- IT Amines, biological studies
(primary; procedure for **coloring keratin**
-contg. fibers using stable diazonium salts)
- IT Hydroxy compounds
Phenols, biological studies
(procedure for **coloring keratin**-contg. fibers
using stable diazonium salts)
- IT Amines, biological studies
(secondary; procedure for **coloring keratin**
-contg. fibers using stable diazonium salts)
- IT 615-50-9
(dprocedure for **coloring keratin**-contg.
fibers using stable diazonium salts)
- IT 51-81-0, 3-Aminophenol hydrochloride 59-48-3, Oxindole 62-53-3D,
Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 67-52-7,
Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7,
1,5-Dihydroxynaphthalene 84-65-1D, Anthraquinone, derivs.
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 95-54-5, o-Phenylenediamine, biological
studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene
95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-
hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline,
biological studies 101-69-9 101-77-9, 4,4'-
Diaminodiphenylmethane 101-80-4, 4,4'-Diaminodiphenyl ether
102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3,
p-Phenylenediamine, biological studies 108-45-2,
m-Phenylenediamine, biological studies 108-46-3, Resorcinol,
biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6,
Phloroglucinol 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3,
2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide
119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D,
Indole, derivs. 120-80-9, Pyrocatechol, biological studies
121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
4-Aminobenzenesulfonic acid 123-30-8, 4-Aminophenol 123-31-9,
Hydroquinone, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic
acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol
150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-15-1D, Indoline, derivs.

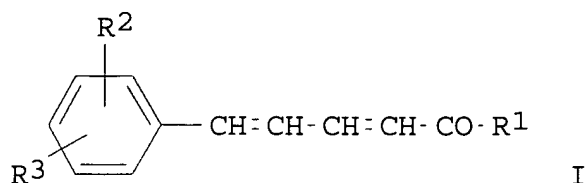
496-73-1, 4-Methylresorcinol 500-85-6D, Indophenol, derivs.
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 575-38-2, 1,7-Dihydroxynaphthalene
575-44-0, 1,6-Dihydroxynaphthalene
578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
2-Aminoquinoline 581-43-1, 2,6-Dihydroxynaphthalene 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
609-20-1, 2,6-Dichloro-p-phenylenediamine 610-74-2,
2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
611-98-3, 4,4'-Diaminobenzophenone 615-66-7, 2-Chloro-p-phenylenediamine
615-71-4, 1,2,4-Triaminobenzene 619-05-6,
3,4-Diaminobenzoic acid 623-09-6, 4-Methylaminoaniline 636-25-9,
2,5-Diaminophenol 876-87-9 887-77-4 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0,
3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-aminophenol
2835-99-6, 3-Methyl-4-aminophenol 2871-01-4,
2-Nitro-4-amino-1-(2-hydroxyethylamino)benzene 3131-52-0,
5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid
3167-49-5, 6-Aminonicotinic acid 3342-78-7, 2-Aminophenylacetic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7,
2,5-Diaminopyridine 4331-29-7, 7-Aminobenzimidazole 4506-66-5,
1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2,
2-Dimethylamino-5-aminopyridine 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone
5131-58-8 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5418-63-3 5434-20-8,
3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid
5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol
6259-50-3, 6-Dimethylamino-4-hydroxy-2-naphthalenesulfonic acid
6358-09-4 6399-72-0, 6-Amino-7-hydroxynaphthalene-2-sulfonic acid
6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
7169-34-8, Coumaranone 7336-20-1 7411-49-6, 3,3',4,4'-Tetraaminobiphenyl tetrahydrochloride
7575-35-1,
N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14263-89-9 14268-66-7, 3,4-Methylenedioxyaniline 14338-36-4,
3-Aminophenylacetic acid 14726-28-4 15883-57-5,
2-Naphthol-3,6-disulfonic acid sodium salt 16082-33-0,

3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
 17227-95-1 19335-11-6, 5-Aminoindazole 20103-09-7,
 2,5-Dichloro-p-phenylenediamine 20546-03-6 22715-34-0,
 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Triaminopyridine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2, N,N-Bis[2-(4-
 aminophenoxy)ethyl]methylaniline trihydrochloride 28020-38-4,
 2,3-Diamino-6-methoxypyridine 28491-52-3 29539-03-5,
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 3,5-Diamino-2,6-dimethoxypyridine dihydrochloride 61693-42-3,
 3-Amino-2,4-dichlorophenol 61925-55-1 62496-02-0,
 2-Methylamino-4,5,6-triaminopyrimidine 64071-86-9 66422-95-5,
 2,4-Diaminophenoxyethanol dihydrochloride 66635-40-3,
 4,4'-Diaminostilbene dihydrochloride 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1, 1,3-Bis(2,4-
 diaminophenoxy)propane tetrahydrochloride 79352-72-0,
 4-Amino-2-aminomethylphenol 83732-72-3, 2-Methylamino-3-amino-6-
 methoxypyridine dihydrochloride 83763-47-7, 2-Amino-4-(2-
 hydroxyethylamino)anisole 84540-47-6, 2,6-Dihydroxy-3,4-
 dimethylpyridine **84540-50-1**, 6-Methyl-3-amino-2-
 chlorophenol 85252-22-8 85679-78-3, 3,5-Diamino-2,6-
 dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
 3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7
 110102-86-8, 2-Methyl-5-amino-4-chlorophenol 114402-54-9,
 1,3-Bis(4-aminophenylamino)propane 115423-86-4,
 1,3-Diamino-2,4-dimethoxybenzene 117907-43-4, 4-Amino-2-
 nitrodiphenylamine-2'-carboxylic acid 126335-41-9,
 2,5-Diaminophenetole 128729-30-6 130582-56-8,
 1,3-Bis(4-aminophenylamino)-2-propanol 135043-64-0,
 2-Aminomethyl-4-aminophenol dihydrochloride 137290-86-9,
 5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol 144644-13-3
 159661-42-4 177080-42-1, 2-Amino-4-(2-hydroxyethylamino)phenol
 202525-71-1 202525-73-3, 2,4,5-Triaminophenol trihydrochloride
 202525-76-6, 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7
 202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9
 215377-52-9, 3,4-Methylenediaminoaniline 223383-77-5,
 4-Amino-3-hydroxynaphthalenesulfonic acid 260981-01-9
 260981-02-0, N-(2-Methoxyethyl)-p-phenylenediamine 260981-03-1,
 2,3-Dichloro-p-phenylenediamine 261156-43-8
 (procedure for **coloring keratin**-contg. fibers
 using stable diazonium salts)

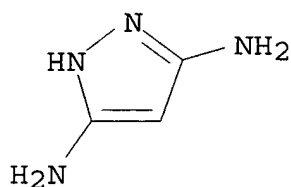
L50 ANSWER 5 OF 22 HCA COPYRIGHT 2003 ACS on STN

132:227152 Agent for **coloring keratin**-containing
 fibers. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A.,
 Germany). Ger. Offen. DE 19842070 A1 20000316, 12 pp. (German).
 CODEN: GWXXBX. APPLICATION: DE 1998-19842070 19980915.

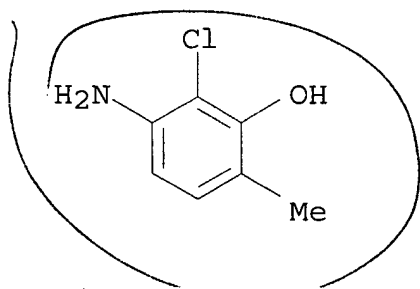
GI



- AB 5-Arylpenta-2,4-dienylcarbonyl compds. [I; R1 = H, C1-4 alkyl; R2, R3 = H, halo, C1-4 alkyl, C1-4 alkoxy, hydroxy-C1-4-alkoxy, OH, NO2, (substituted) amino, C1-4 acyl, heterocyclyl; or 2 of the residues may together form a condensed benzene ring] are direct **hair dyes** which provide an exceptional brilliance and depth of **color** and permit many **color** nuances. They may be used in the presence of oxidizing agents. Thus, a slurry of 10 mmol 5-[4-(N,N-dimethylamino)phenyl]penta-2,4-dien-1-al, 10 mmol NaOAc, and 1 drop 20% fatty alkyl ether sulfate soln. in 100 mL H2O was heated briefly to 80.degree., cooled, filtered, the pH was adjusted, and the soln. was applied to gray **hair** at 30.degree. for 30 min. The **hair** took on an orange-brown **color** at pH 6.0 and a brownish-rose **color** at pH 2.0.
- IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
6-Methyl-3-amino-2-chlorophenol
(agent for **coloring keratin**-contg. fibers)
- RN 16082-33-0 HCA
- CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



- RN 84540-50-1 HCA
- CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM-A61K007-13
- ICS C07C223-06; C07C225-16

CC 62-3 (Essential Oils and Cosmetics)
ST arylpentadienylcarbonyl **hair dye**;
pentadienylcarbonyl compd aryl **hair dye**
IT Amino acids, biological studies
Hydroxy compounds
Peptides, biological studies
Phenols, biological studies
(agent for **coloring keratin**-contg. fibers)
IT Nitriles, biological studies
(arom.; agent for **coloring keratin**-contg. fibers)
IT **Hair** preparations
(**dyes**; agent for **coloring keratin**-contg. fibers)
IT Heterocyclic compounds
(nitrogen; agent for **coloring keratin**-contg. fibers)
IT Amines, biological studies
(primary; agent for **coloring keratin**-contg. fibers)
IT Amines, biological studies
(secondary; agent for **coloring keratin**-contg. fibers)
IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
84-65-1D, Anthraquinone, derivs. 87-02-5, 7-Amino-4-
hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1,
2-Aminobenzenesulfonic acid 89-25-8 89-57-6, 5-Aminosalicylic
acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol
90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-
disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 95-54-5,
o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol
95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 100-01-6, 4-Nitroaniline,
biological studies 101-77-9, 4,4'-Diaminodiphenylmethane
101-80-4, 4,4'-Diaminodiphenyl ether 102-32-9,
3,4-Dihydroxyphenylacetic acid 106-50-3, p-Phenylenediamine,
biological studies 108-45-2, m-Phenylenediamine, biological
studies 108-46-3, Resorcinol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-70-7,
4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9,
Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic
acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8,
4-Aminophenol 123-31-9, Hydroquinone, biological studies
139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine
141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological
studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol

150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol
156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine
462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
2,5-Dimethylresorcinol 496-15-1D, Indoline, derivs. 496-73-1,
4-Methylresorcinol 500-85-6D, Indophenol, derivs. 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3, 1-Ethylquinaldinium iodide
608-25-3, 2-Methylresorcinol 609-20-1, 2,6-Dichloro-p-
phenylenediamine 610-74-2, 2,5-Diaminobenzoic acid 611-03-0,
2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone
615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4,
1,2,4-Triaminobenzene 619-05-6, 3,4-Diaminobenzoic acid
623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol
876-87-9, 1-Methylquinaldinium iodide 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0,
3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-
aminophenol 2835-99-6, 3-Methyl-4-aminophenol 2871-01-4
3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-
Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3342-78-7, 2-Aminophenylacetic acid 3855-78-5,
2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7,
7-Aminobenzimidazole 4506-66-5, 1,2,4,5-Tetraaminobenzene
tetrahydrochloride 4928-43-2, 2-Dimethylamino-5-aminopyridine
5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5131-58-8 5192-03-0,
5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole
5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5418-63-3 5434-20-8,
3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid
5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol
6259-50-3, 6-Dimethylamino-4-hydroxy-2-naphthalenesulfonic acid
6358-09-4 6399-72-0, 6-Amino-7-hydroxynaphthalene-2-sulfonic acid
6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
7169-34-8, Coumaranone 7336-20-1 7411-49-6, 3,3',4,4'-
Tetraaminobiphenyl tetrahydrochloride 7575-35-1,
N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 14338-36-4,

3-Aminophenylacetic acid 16082-33-0, 3,5-Diaminopyrazole
 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole
 20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0,
 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Triaminopyridine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 27394-81-6 28020-38-4,
 2,3-Diamino-6-methoxypyridine 28491-52-3 29539-03-5,
 5,6-Dihydroxyindoline 34572-45-7, 2-Nitro-1-amino-4-[bis(2-
 hydroxyethyl)amino]benzene 50610-28-1 54381-16-7 55047-63-7
 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 61693-42-3,
 3-Amino-2,4-dichlorophenol 62378-72-7 62496-02-0,
 2-Methylamino-4,5,6-triaminopyrimidine 66635-40-3,
 4,4'-Diaminostilbene dihydrochloride 70484-29-6 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1, 1,3-Bis(2,4-
 diaminophenoxy)propane tetrahydrochloride 79352-72-0,
 4-Amino-2-aminomethylphenol 83073-86-3 83732-72-3,
 2-Methylamino-3-amino-6-methoxypyridine dihydrochloride
 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1,
 6-Methyl-3-amino-2-chlorophenol 85679-78-3, 3,5-Diamino-2,6-
 dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
 3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7,
 4-Amino-2-(hydroxymethyl)phenol 110102-86-8, 2-Methyl-5-amino-4-
 chlorophenol 114402-54-9, 1,3-Bis(4-aminophenylamino)propane
 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 117907-43-4
 126335-41-9, 2,5-Diaminophenetole 128729-30-6 130582-56-8,
 1,3-Bis(4-aminophenylamino)-2-propanol 135043-64-0,
 2-Aminomethyl-4-aminophenol dihydrochloride 137290-86-9,
 5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol 144644-13-3
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 202525-71-1 202525-73-3, 2,4,5-Triaminophenol trihydrochloride
 202525-74-4, Pentaaminobenzene pentahydrochloride 202525-75-5,
 Hexaaminobenzene hexahydrochloride 202525-76-6,
 2,4,6-Triaminoresorcinol trihydrochloride 202525-77-7
 202525-78-8, 4,6-Diaminopyrogallol dihydrochloride 202525-79-9
 215377-52-9, 3,4-Methylenediaminoaniline 223383-77-5,
 4-Amino-3-hydroxynaphthalenesulfonic acid 260980-91-4
 260980-92-5 260980-93-6 260980-94-7 260980-95-8 260980-96-9
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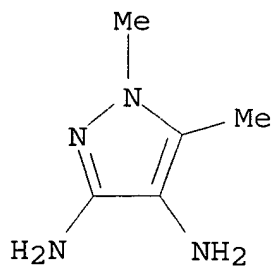
(agent for coloring keratin-contg. fibers)

L50 ANSWER 6 OF 22 HCA COPYRIGHT 2003 ACS on STN = 45 6090162
 131:78156 Oxidative hair dye composition comprising
 a 5-substituted 3,4-diaminopyrazole and a halogenated m-aminophenol.
 Maubru, Mireille (L'Oreal S. A., Fr.). Fr. Demande FR 2770775 A1
 19990514, 29 pp. (French). CODEN: FRXXBL. APPLICATION: FR
 1997-14051 19971107.

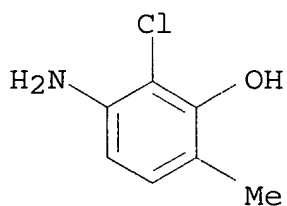
AB The title compn. is disclosed. A hair dye
 compn. contained 3,4-diamino-5-Me pyrazole dihydrochloride 0.555,
 3-aminophenol 0.327 and excipients and water q.s. 100 g. At the
 time of use the compn. is mixed with equal amts. of 20 vol. hydrogen

peroxide and applied for 30 min on the **hair**, then rinsed, washed with **shampoo** and dried to obtain the desired **color**.

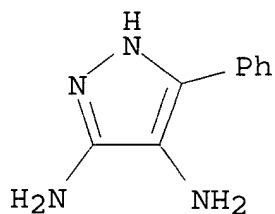
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199341-00-9 199341-01-0 199341-02-1
199341-03-2 199341-04-3 199341-05-4
199341-06-5 199341-07-6 199341-08-7
199341-09-8 199341-10-1 199341-11-2
199341-12-3 199341-13-4 199341-14-5
199341-15-6 199341-16-7 199341-17-8
199341-18-9 199341-19-0 199341-21-4
199341-22-5 199341-23-6 199341-24-7
199341-25-8 199341-26-9 199341-27-0
199341-28-1 199341-29-2 199341-30-5
199341-31-6 199341-32-7 199341-33-8
199341-34-9 199341-37-2 199341-39-4
199341-41-8 199341-43-0 199341-44-1
199341-46-3 199341-49-6 199341-51-0
199341-52-1 199341-53-2 199341-54-3
199341-55-4 199341-56-5 199341-57-6
199341-58-7 199341-59-8 199341-60-1
199341-61-2 199341-62-3 199341-63-4
199341-64-5 199341-65-6 199341-66-7
199341-67-8 199341-68-9 199341-69-0
199341-70-3 199341-71-4 199341-72-5
199341-73-6 199341-74-7 199341-75-8
199341-76-9 199341-77-0 199341-78-1
199341-79-2 199341-80-5 199341-81-6
199341-82-7 199341-83-8 199341-84-9
199341-85-0 199341-86-1 199341-87-2
199341-88-3 199341-89-4 199341-90-7
199341-91-8 199341-92-9 199341-93-0
199341-94-1 199341-95-2 199341-96-3
199341-97-4 199341-98-5 199341-99-6
199342-00-2 199342-01-3 199342-02-4
199342-03-5 199342-04-6 199342-05-7
199342-06-8 199342-07-9 199342-08-0
199342-09-1 199342-10-4 229028-77-7
229028-78-8 229028-79-9 229028-80-2
229028-81-3 229028-82-4 229028-83-5
(oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)
RN 76368-87-1 HCA
CN 1H-Pyrazole-3,4-diamine, 1,5-dimethyl- (9CI) (CA INDEX NAME)



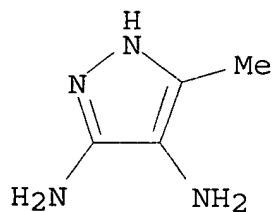
RN 84540-50-1 HCA
CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



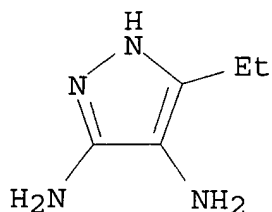
RN 122128-83-0 HCA
CN 1H-Pyrazole-3,4-diamine, 5-phenyl- (9CI) (CA INDEX NAME)



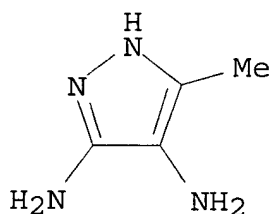
RN 199340-92-6 HCA
CN 1H-Pyrazole-3,4-diamine, 5-methyl-, dihydrochloride (9CI) (CA INDEX NAME)



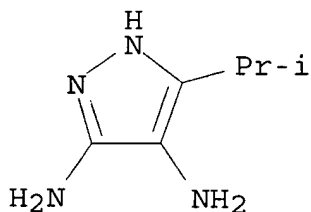
RN 199340-98-2 HCA
CN 1H-Pyrazole-3,4-diamine, 5-ethyl- (9CI) (CA INDEX NAME)



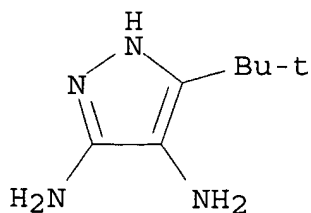
RN 199340-99-3 HCA
CN 1H-Pyrazole-3,4-diamine, 5-methyl- (9CI) (CA INDEX NAME)



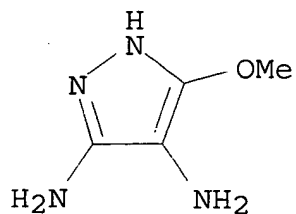
RN 199341-00-9 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(1-methylethyl)- (9CI) (CA INDEX NAME)



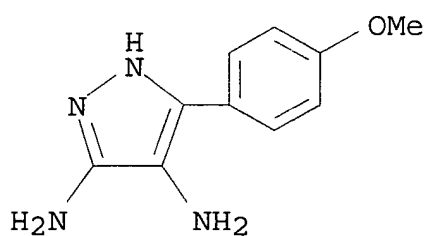
RN 199341-01-0 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



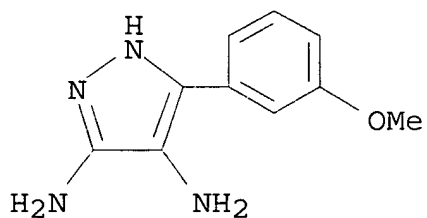
RN 199341-02-1 HCA
CN 1H-Pyrazole-3,4-diamine, 5-methoxy- (9CI) (CA INDEX NAME)



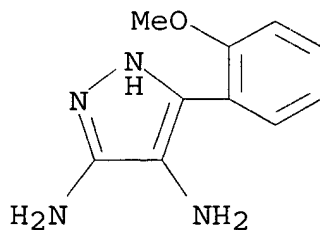
RN 199341-03-2 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



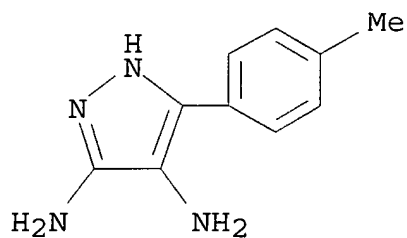
RN 199341-04-3 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 199341-05-4 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)

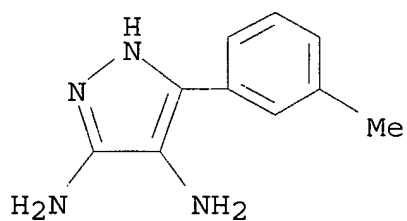


RN 199341-06-5 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(4-methylphenyl)- (9CI) (CA INDEX NAME)



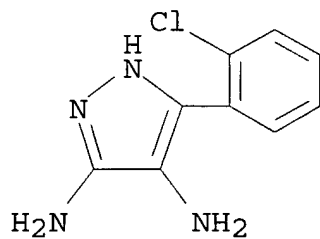
RN 199341-07-6 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(3-methylphenyl)- (9CI) (CA INDEX NAME)



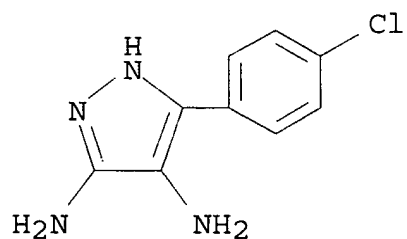
RN 199341-08-7 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(2-chlorophenyl)- (9CI) (CA INDEX NAME)



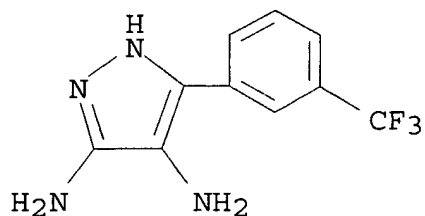
RN 199341-09-8 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

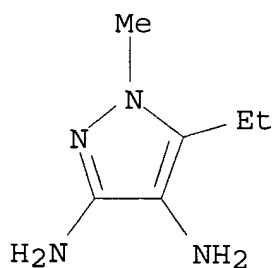


RN 199341-10-1 HCA

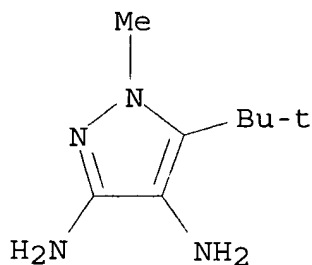
CN 1H-Pyrazole-3,4-diamine, 5-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



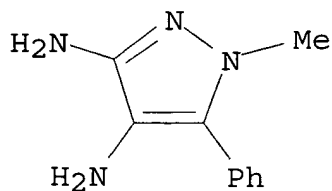
RN 199341-11-2 HCA
CN 1H-Pyrazole-3,4-diamine, 5-ethyl-1-methyl- (9CI) (CA INDEX NAME)



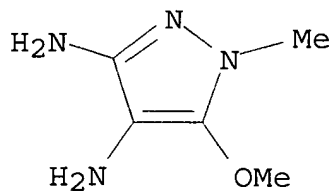
RN 199341-12-3 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(1,1-dimethylethyl)-1-methyl- (9CI) (CA INDEX NAME)



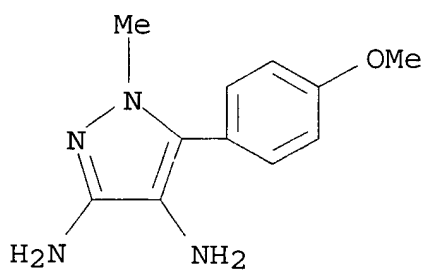
RN 199341-13-4 HCA
CN 1H-Pyrazole-3,4-diamine, 1-methyl-5-phenyl- (9CI) (CA INDEX NAME)



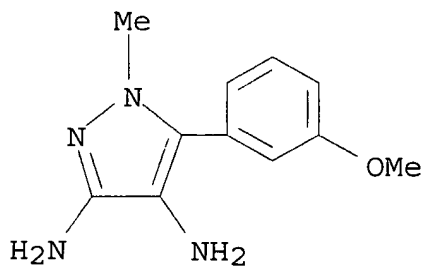
RN 199341-14-5 HCA
CN 1H-Pyrazole-3,4-diamine, 5-methoxy-1-methyl- (9CI) (CA INDEX NAME)



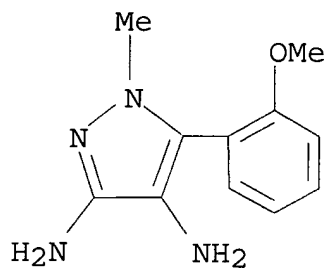
RN 199341-15-6 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(4-methoxyphenyl)-1-methyl- (9CI) (CA
INDEX NAME)



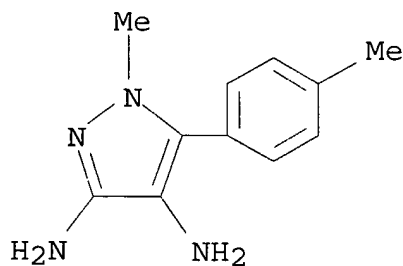
RN 199341-16-7 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(3-methoxyphenyl)-1-methyl- (9CI) (CA
INDEX NAME)



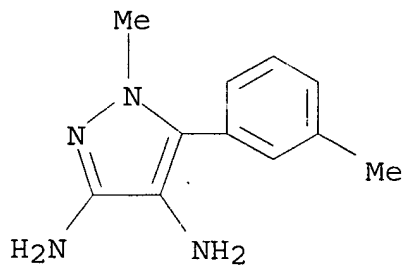
RN 199341-17-8 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(2-methoxyphenyl)-1-methyl- (9CI) (CA
INDEX NAME)



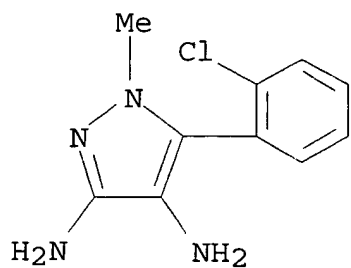
RN 199341-18-9 HCA
CN 1H-Pyrazole-3,4-diamine, 1-methyl-5-(4-methylphenyl)- (9CI) (CA
INDEX NAME)



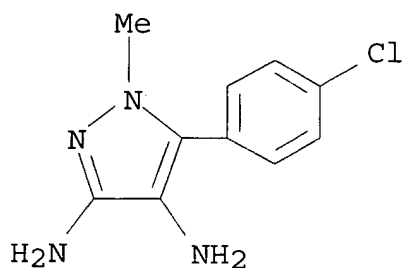
RN 199341-19-0 HCA
CN 1H-Pyrazole-3,4-diamine, 1-methyl-5-(3-methylphenyl)- (9CI) (CA
INDEX NAME)



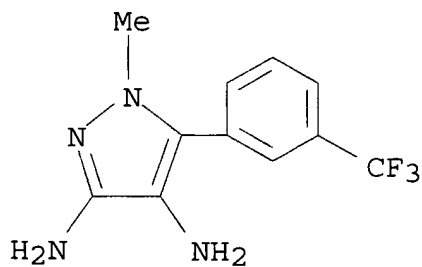
RN 199341-21-4 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(2-chlorophenyl)-1-methyl- (9CI) (CA
INDEX NAME)



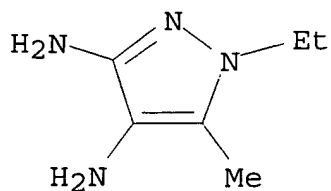
RN 199341-22-5 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(4-chlorophenyl)-1-methyl- (9CI) (CA INDEX NAME)



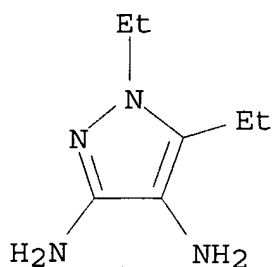
RN 199341-23-6 HCA
CN 1H-Pyrazole-3,4-diamine, 1-methyl-5-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



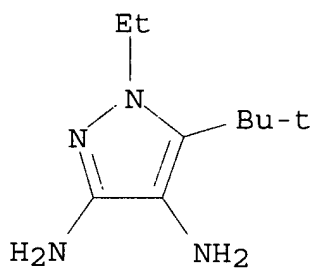
RN 199341-24-7 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-methyl- (9CI) (CA INDEX NAME)



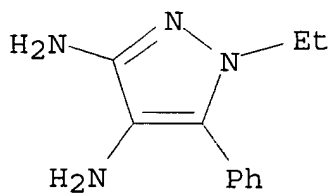
RN 199341-25-8 HCA
CN 1H-Pyrazole-3,4-diamine, 1,5-diethyl- (9CI) (CA INDEX NAME)



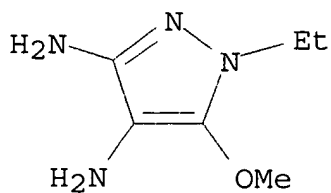
RN 199341-26-9 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(1,1-dimethylethyl)-1-ethyl- (9CI) (CA INDEX NAME)



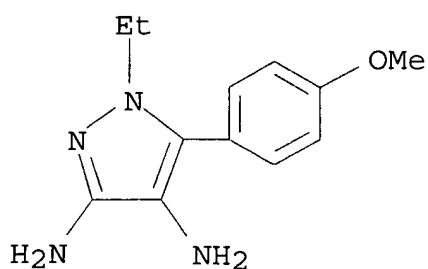
RN 199341-27-0 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-phenyl- (9CI) (CA INDEX NAME)



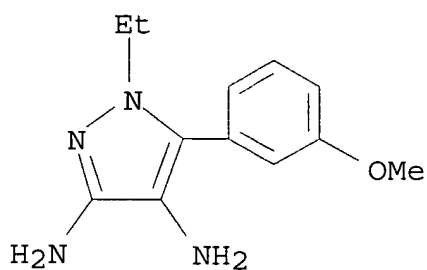
RN 199341-28-1 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-methoxy- (9CI) (CA INDEX NAME)



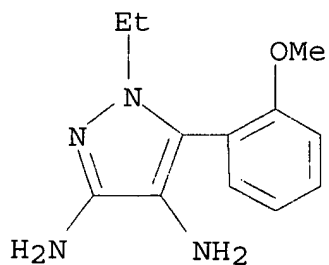
RN 199341-29-2 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-(4-methoxyphenyl)- (9CI) (CA
INDEX NAME)



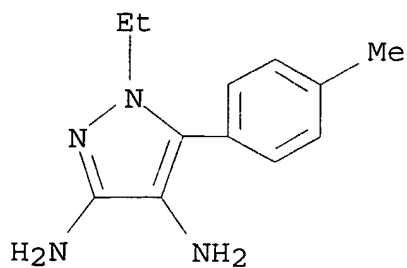
RN 199341-30-5 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-(3-methoxyphenyl)- (9CI) (CA
INDEX NAME)



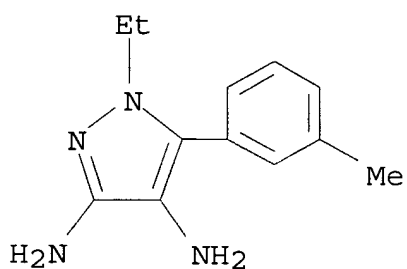
RN 199341-31-6 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-(2-methoxyphenyl)- (9CI) (CA
INDEX NAME)



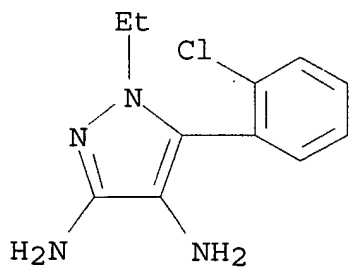
RN 199341-32-7 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-(4-methylphenyl)- (9CI) (CA
INDEX NAME)



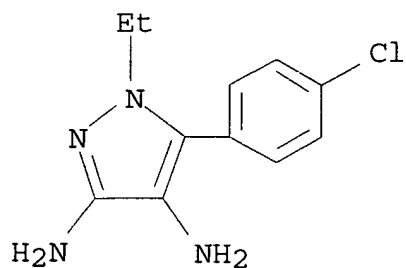
RN 199341-33-8 HCA
CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-(3-methylphenyl)- (9CI) (CA
INDEX NAME)



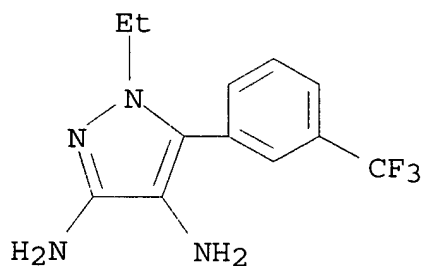
RN 199341-34-9 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(2-chlorophenyl)-1-ethyl- (9CI) (CA
INDEX NAME)



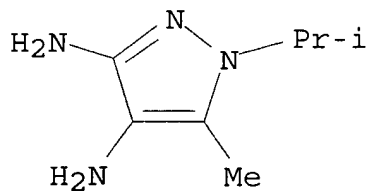
RN 199341-37-2 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(4-chlorophenyl)-1-ethyl- (9CI) (CA
INDEX NAME)



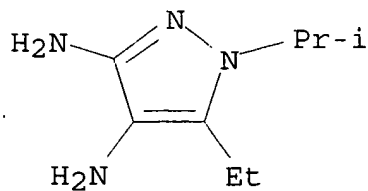
RN 199341-39-4 HCA
 CN 1H-Pyrazole-3,4-diamine, 1-ethyl-5-[3-(trifluoromethyl)phenyl]-(9CI) (CA INDEX NAME)



RN 199341-41-8 HCA
 CN 1H-Pyrazole-3,4-diamine, 5-methyl-1-(1-methylethyl)-(9CI) (CA INDEX NAME)

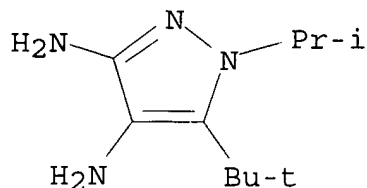


RN 199341-43-0 HCA
 CN 1H-Pyrazole-3,4-diamine, 5-ethyl-1-(1-methylethyl)-(9CI) (CA INDEX NAME)



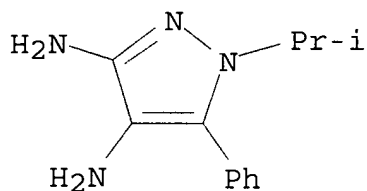
RN 199341-44-1 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(1,1-dimethylethyl)-1-(1-methylethyl)-
(9CI) (CA INDEX NAME)



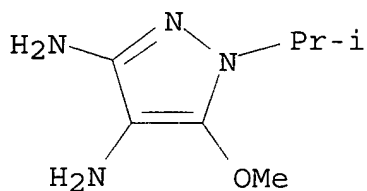
RN 199341-46-3 HCA

CN 1H-Pyrazole-3,4-diamine, 1-(1-methylethyl)-5-phenyl- (9CI) (CA
INDEX NAME)



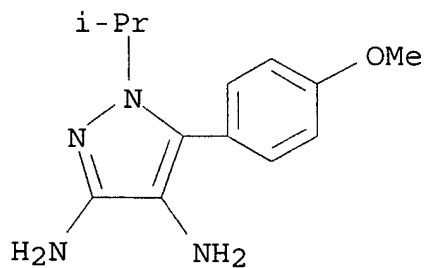
RN 199341-49-6 HCA

CN 1H-Pyrazole-3,4-diamine, 5-methoxy-1-(1-methylethyl)- (9CI) (CA
INDEX NAME)



RN 199341-51-0 HCA

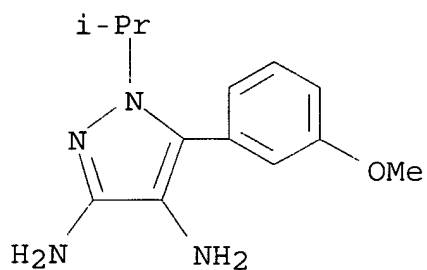
CN 1H-Pyrazole-3,4-diamine, 5-(4-methoxyphenyl)-1-(1-methylethyl)-
(9CI) (CA INDEX NAME)



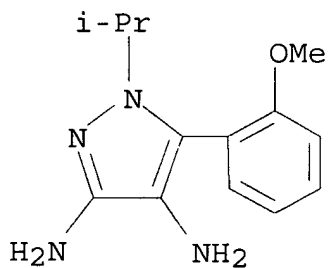
RN 199341-52-1 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(3-methoxyphenyl)-1-(1-methylethyl)-

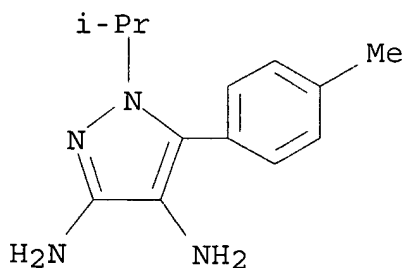
(9CI) (CA INDEX NAME)



RN 199341-53-2 HCA

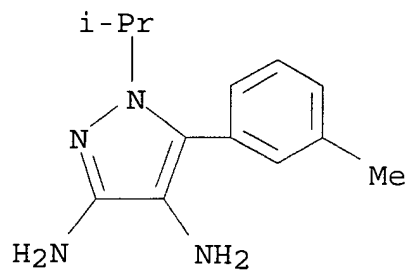
CN 1H-Pyrazole-3,4-diamine, 5-(2-methoxyphenyl)-1-(1-methylethyl)-
(9CI) (CA INDEX NAME)

RN 199341-54-3 HCA

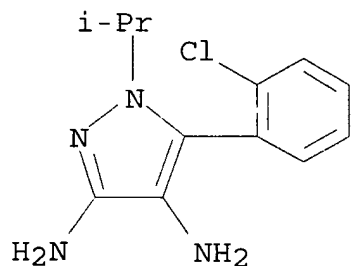
CN 1H-Pyrazole-3,4-diamine, 1-(1-methylethyl)-5-(4-methylphenyl)- (9CI)
(CA INDEX NAME)

RN 199341-55-4 HCA

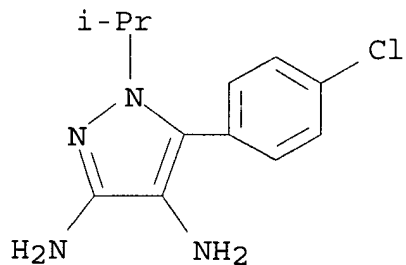
CN 1H-Pyrazole-3,4-diamine, 1-(1-methylethyl)-5-(3-methylphenyl)- (9CI)
(CA INDEX NAME)



RN 199341-56-5 HCA

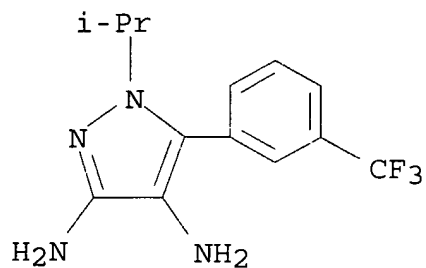
CN 1H-Pyrazole-3,4-diamine, 5-(2-chlorophenyl)-1-(1-methylethyl)- (9CI)
(CA INDEX NAME)

RN 199341-57-6 HCA

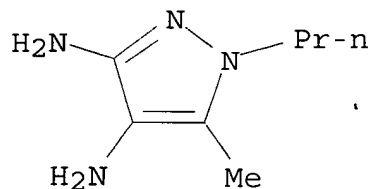
CN 1H-Pyrazole-3,4-diamine, 5-(4-chlorophenyl)-1-(1-methylethyl)- (9CI)
(CA INDEX NAME)

RN 199341-58-7 HCA

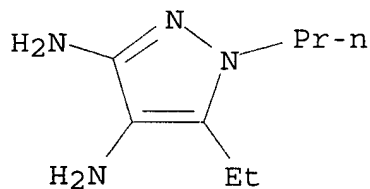
CN 1H-Pyrazole-3,4-diamine, 1-(1-methylethyl)-5-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



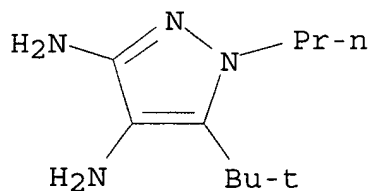
RN 199341-59-8 HCA
CN 1H-Pyrazole-3,4-diamine, 5-methyl-1-propyl- (9CI) (CA INDEX NAME)



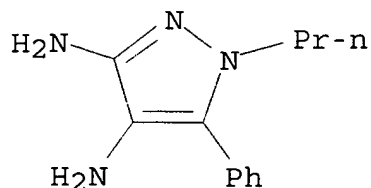
RN 199341-60-1 HCA
CN 1H-Pyrazole-3,4-diamine, 5-ethyl-1-propyl- (9CI) (CA INDEX NAME)



RN 199341-61-2 HCA
CN 1H-Pyrazole-3,4-diamine, 5-(1,1-dimethylethyl)-1-propyl- (9CI) (CA INDEX NAME)

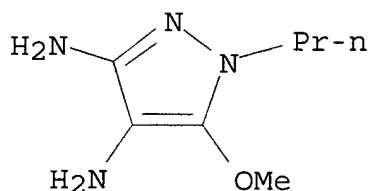


RN 199341-62-3 HCA
CN 1H-Pyrazole-3,4-diamine, 5-phenyl-1-propyl- (9CI) (CA INDEX NAME)



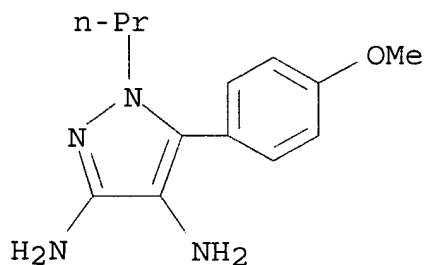
RN 199341-63-4 HCA

CN 1H-Pyrazole-3,4-diamine, 5-methoxy-1-propyl- (9CI) (CA INDEX NAME)



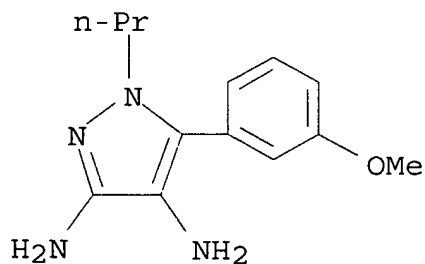
RN 199341-64-5 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(4-methoxyphenyl)-1-propyl- (9CI) (CA INDEX NAME)



RN 199341-65-6 HCA

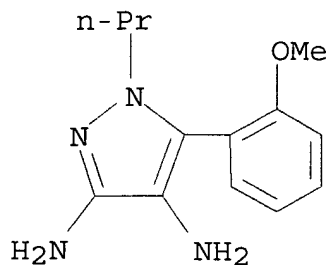
CN 1H-Pyrazole-3,4-diamine, 5-(3-methoxyphenyl)-1-propyl- (9CI) (CA INDEX NAME)



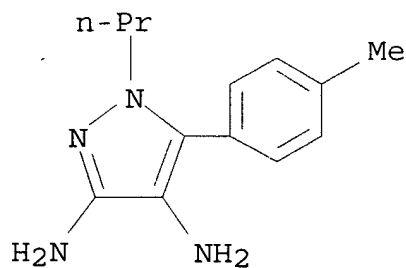
RN 199341-66-7 HCA

CN 1H-Pyrazole-3,4-diamine, 5-(2-methoxyphenyl)-1-propyl- (9CI) (CA

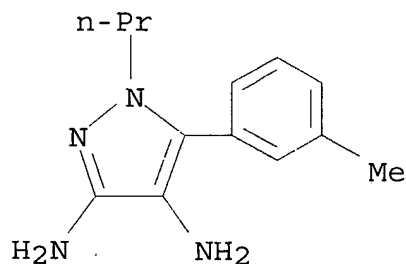
INDEX NAME)



RN 199341-67-8 HCA

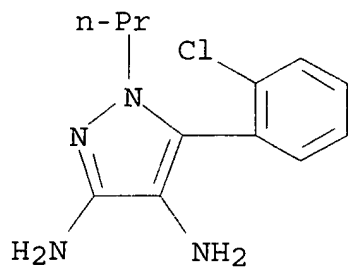
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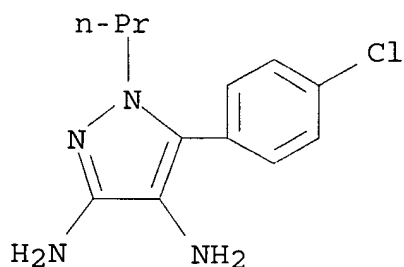
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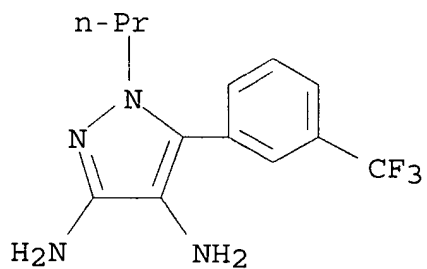
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INDEX NAME)



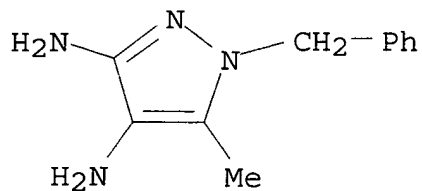
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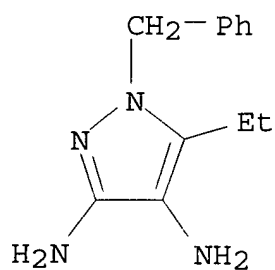


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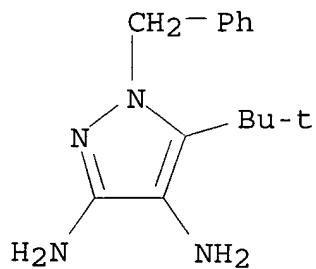
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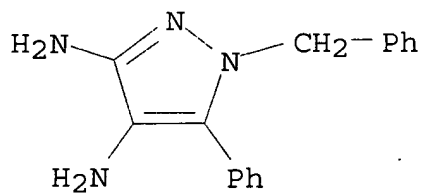
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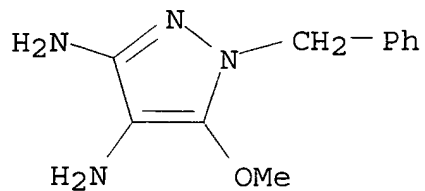
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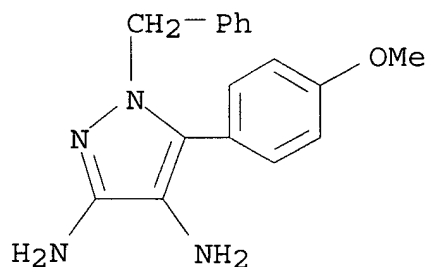
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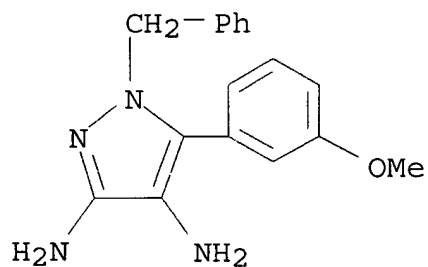
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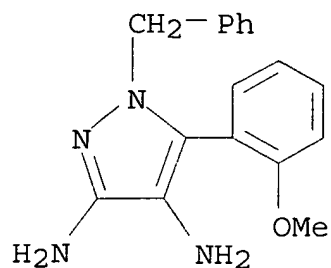
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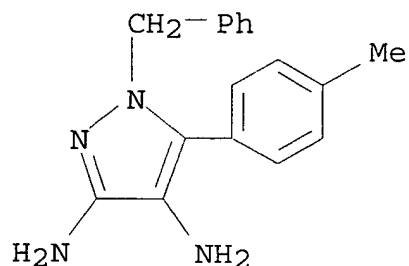


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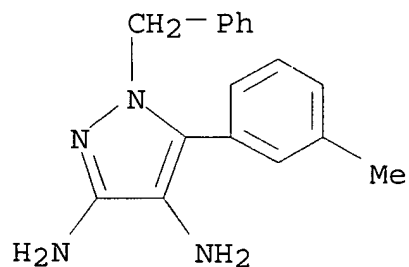
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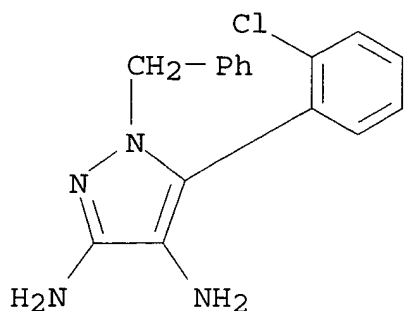
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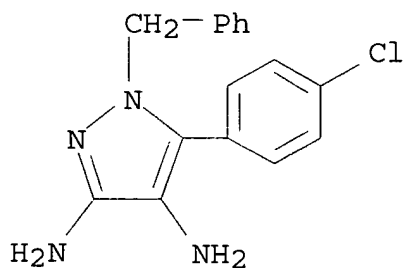
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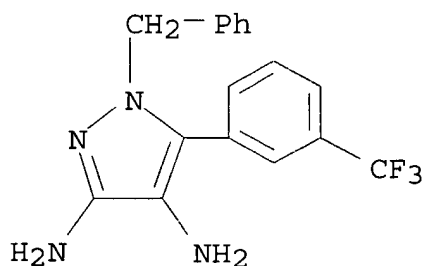
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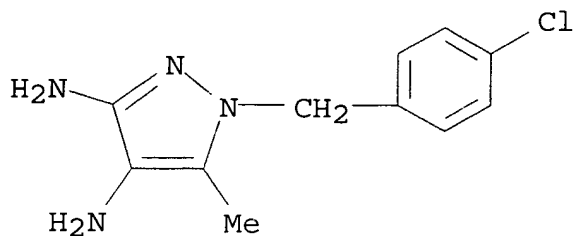
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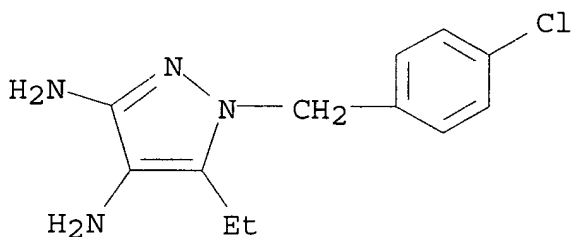
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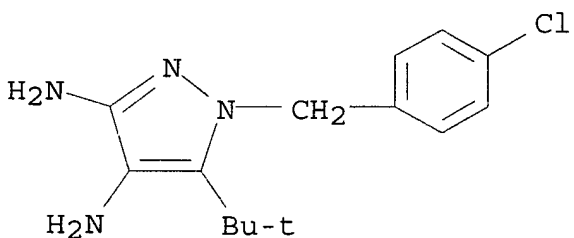
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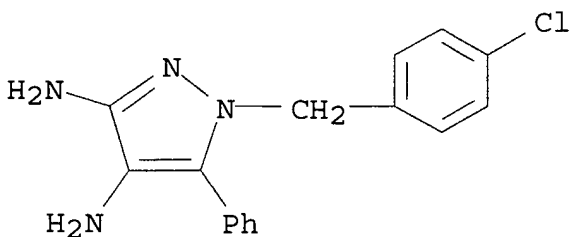
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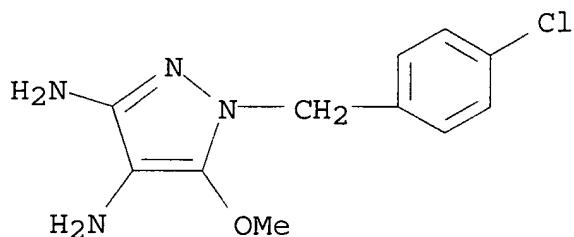


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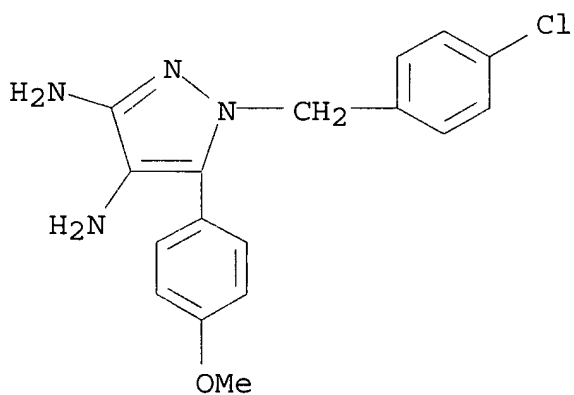


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CN 1H-Pyrazole-3,4-diamine, 1-[(4-chlorophenyl)methyl]-5-methoxy- (9CI)
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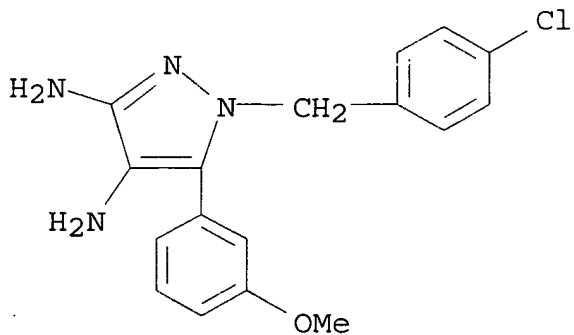
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RN 199341-91-8 HCA

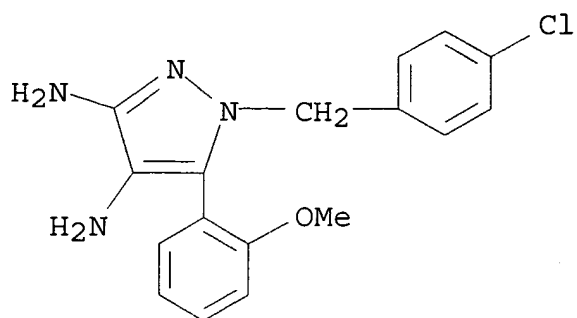
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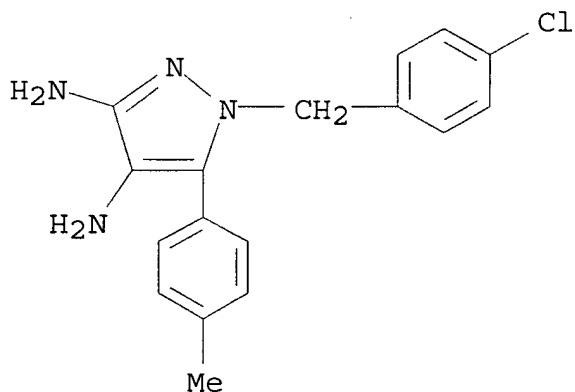
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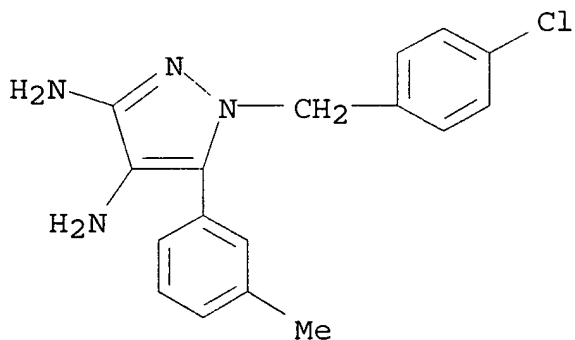
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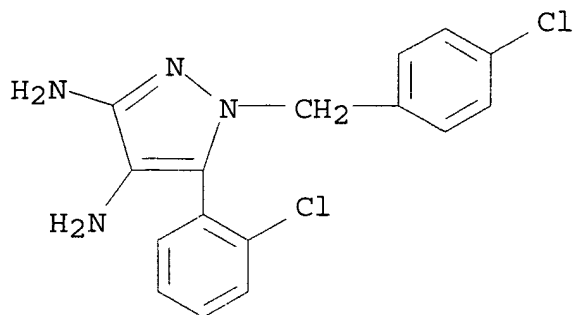
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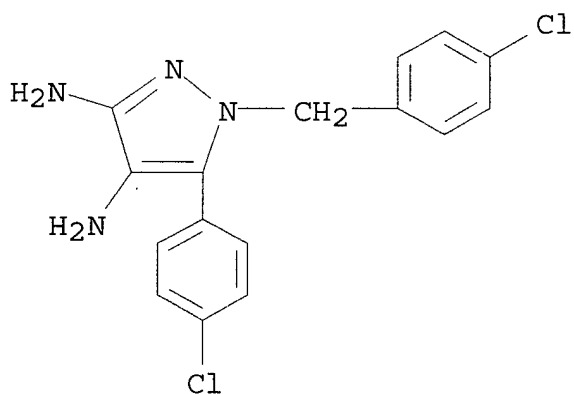
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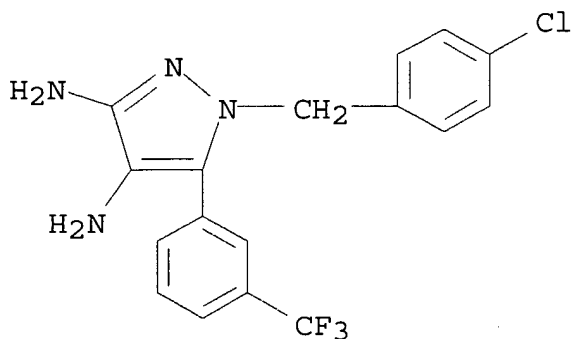
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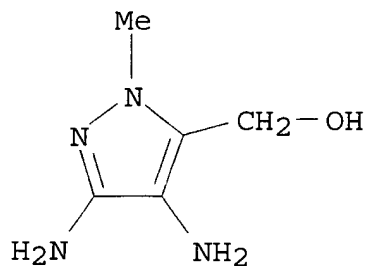
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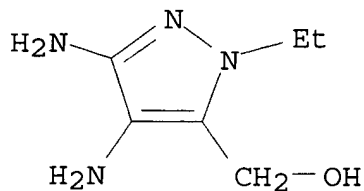
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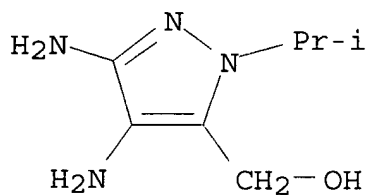
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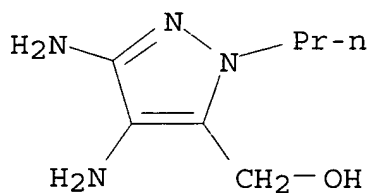
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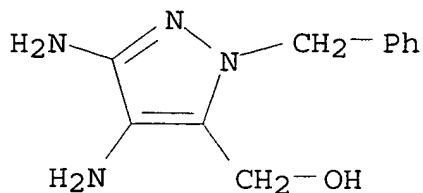
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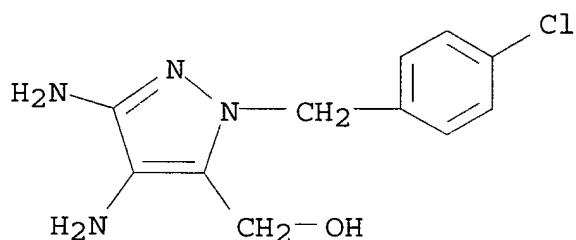
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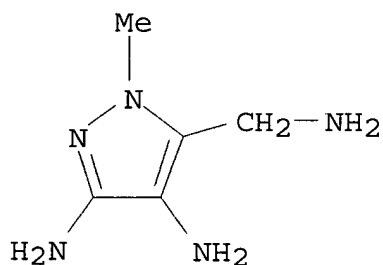
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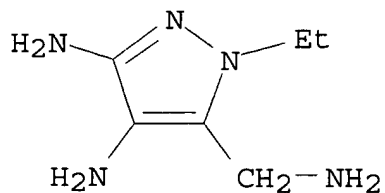
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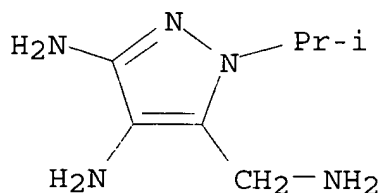
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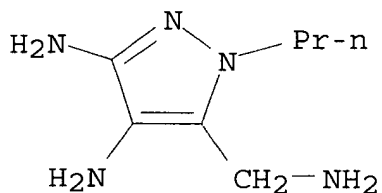
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(CA INDEX NAME)



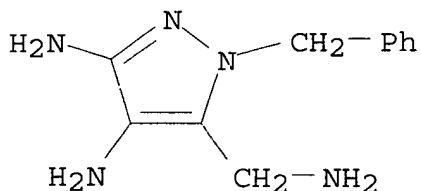
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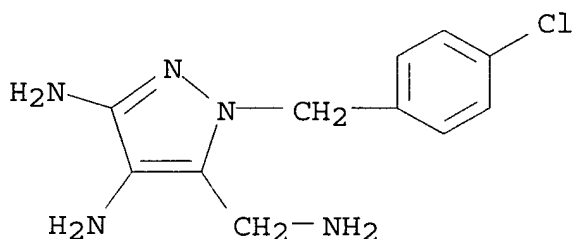
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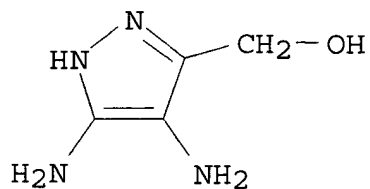
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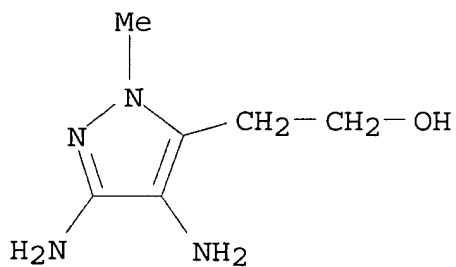
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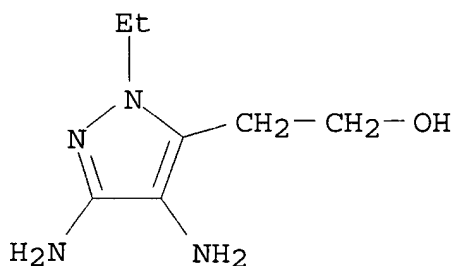
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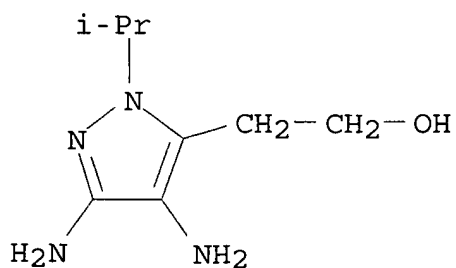
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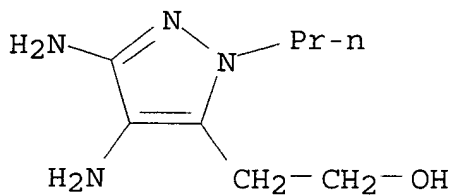
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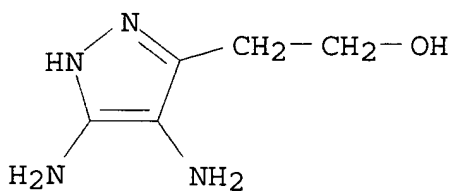
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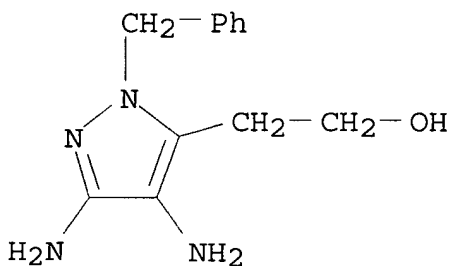
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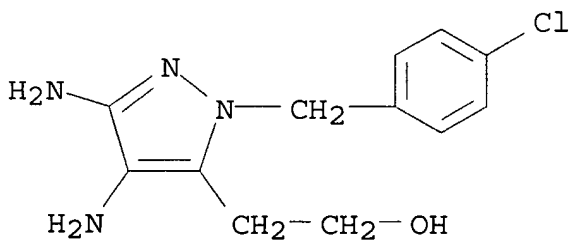
RN 229028-82-4 HCA

CN 1H-Pyrazole-5-ethanol, 3,4-diamino-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 229028-83-5 HCA

CN 1H-Pyrazole-5-ethanol, 3,4-diamino-1-[(4-chlorophenyl)methyl]- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 27

ST oxidative **hair dye** diaminopyrazole halogenated
aminophenol

IT Alcohols, biological studies
(C1-4; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Alcohols, biological studies
(aralkyl; oxidative **hair dye** compn.
comprising substituted diaminopyrazole and halogenated
aminophenol)

IT Cosmetics
(creams; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT **Hair** preparations
(**dyes**, oxidative; oxidative **hair dye**
compn. comprising substituted diaminopyrazole and halogenated
aminophenol)

IT Glycols, biological studies
(ethers; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Cosmetics
(gels; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Ethers, biological studies
(glycol; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Cosmetics
(liqs.; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Salts, biological studies
(of peroxy acids; oxidative **hair dye** compn.
comprising substituted diaminopyrazole and halogenated
aminophenol)

IT Solvents
(org.; oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Oxidizing agents
(oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

IT Glycols, biological studies
Peroxy acids
Peroxysulfates
(oxidative **hair dye** compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

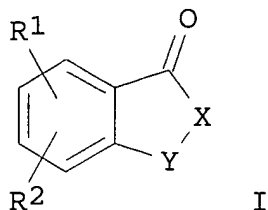
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563-69-9, Carbonoperoxoic acid 6358-06-1, 3-Amino 6-chlorophenol
7722-84-1, Hydrogen peroxide, biological studies 7789-31-3D,
Bromic acid, alkali metal salts 55120-56-4 **76368-87-1**
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199342-07-9 199342-08-0 199342-09-1
199342-10-4 221129-68-6 221129-69-7 229028-77-7
229028-78-8 229028-79-9 229028-80-2
229028-81-3 229028-82-4 229028-83-5

(oxidative hair dye compn. comprising
substituted diaminopyrazole and halogenated aminophenol)

L50 ANSWER 7 OF 22 HCA COPYRIGHT 2003 ACS on STN
130:316424 Use of compositions containing indanones for dyeing
fibers containing keratin. Moeller, Hinrich; Hoeffkes,
Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19745355 A1
19990415, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE
1997-19745355 19971014.

GI

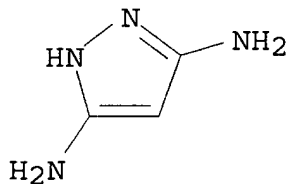


AB Combinations of indanones [I; R₁, R₂ = H, halo, C₁-4 alkyl or alkoxy or acyl, OH, NO₂, CO₂H, SO₃H, (substituted) amino, etc.; or R₁R₂ complete a condensed benzene ring; X = C:O, CHNO₂, C:NOH; Y = CH₂, CH₂CH₂, C:O; X, Y are not both C:O] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of **dyes** for **hair**, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H₂O₂. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. **Dyeing** may be enhanced by addn. of ammonium or metal salts and addnl. direct **dyes**. Thus, a mixt. of 2-nitro-1,3-indandione 10, 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane-4HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray **hair** for 30 min at 30.degree. to produce an intense blue-black **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
(use of compns. contg. indanones for **dyeing** fibers
contg. **keratin**)

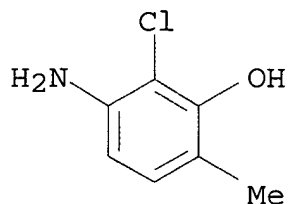
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
ICS D06P003-14; D06P003-30; C09B057-00
- CC 62-3 (Essential Oils and Cosmetics)
- ST indanone alc amine **hair dye**
- IT Amines, biological studies
(arom.; use of compns. contg. indanones for **dyeing**
fibers contg. **keratin**)
- IT **Hair** preparations
(**dyes**, oxidative; use of compns. contg. indanones for
dyeing fibers contg. **keratin**)
- IT **Hair** preparations
(**dyes**; use of compns. contg. indanones for
dyeing fibers contg. **keratin**)
- IT Heterocyclic compounds
(nitrogen, hydroxylated; use of compns. contg. indanones for
dyeing fibers contg. **keratin**)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of compns. contg. indanones for **dyeing**
fibers contg. **keratin**)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of compns. contg. indanones for **dyeing**
fibers contg. **keratin**)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of compns. contg. indanones for **dyeing** fibers
contg. **keratin**)
- IT Amino acids, biological studies
(.omega.-amino acids; use of compns. contg. indanones for
dyeing fibers contg. **keratin**)
- IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-16-9, Benzothiazole
95-54-5, 1,2-Benzenediamine, biological studies 95-55-6,

2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9,
3,4-Dihydroxyphenylacetic acid 103-82-2, Phenylacetic acid,
biological studies 106-50-3, 1,4-Benzenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7,
Fischer's base 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3,
2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide
119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9,
1H-Indole, biological studies 120-80-9, 1,2-Benzenediol,
biological studies 121-47-1, 3-Aminobenzenesulfonic acid
121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies
139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine
141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological
studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol
150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol
156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine
462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2,
2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6 623-09-6, 4-Methylaminoaniline 636-25-9,
2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole
1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
4-Hydroxy-2,5,6-triaminopyrimidine 1125-60-6, 5-Aminoisoquinoline
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole
3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5,
6-Aminonicotinic acid 3674-33-7, 2-Nitro-1,3-indandione
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-

indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2,
Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2,
4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8,
Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 13167-95-8, Indan-1,2,3-trione
2-oxime 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7,
3,4-Methylenedioxyaniline 15028-10-1, 2-Oximino-1-indanone
16082-33-0, 3,5-Diaminopyrazole 16214-27-0, 1,2-Indandione
16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole
20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0,
2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate
55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5
60320-10-7 61224-35-9 61693-42-3 62496-02-0,
2-(Methylamino)-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3
69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-
Diaminophenoxyethanol 74918-21-1 79352-72-0 80030-92-8
83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine
84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-
6-methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
93841-25-9 104333-09-7 114402-54-9 115423-86-4 126335-41-9
128729-30-6 130582-56-8 135043-64-0 137290-86-9 144644-13-3
159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
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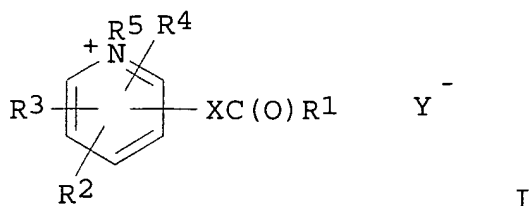
(use of compns. contg. indanones for **dyeing** fibers
contg. **keratin**)

L50 ANSWER 8 OF 22 HCA COPYRIGHT 2003 ACS on STN

130:301487 Use of onium aldehydes and onium ketones for **dyeing**
fibers containing **keratin**. Moeller, Hinrich; Hoeffkes,
Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19745356 A1
19990415, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE
1997-19745356 19971014.

GI

US 6371993
Bad date

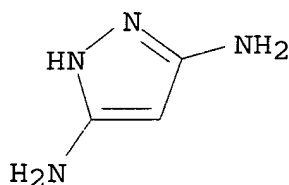


AB Combinations of onium aldehydes and ketones [I; R1 = H, C1-4 alkyl, aryl, heteroaryl; R2-R4 = H, halo, C1-4 alkyl or alkoxy or acyl, OH, NO2, CF3, aryl, (substituted) amino, etc.; R5 = C1-4 alkyl, aryl, heteroaryl, aralkyl; X = bond, (substituted) vinylene or phenylene; Y = halide, PhSO3-, p-toluenesulfonate, MeSO3-, F3CSO3-, ClO4-, HSO4-, etc.] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of **dyes** for **hair**, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. **Dyeing** may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of 4-formyl-1-methylpyridinium benzenesulfonate 10, 2-(methylamino)-3-amino-6-methoxypyridine-2HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray **hair** for 30 min at 30.degree. to produce an intense dark violet **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
(use of onium aldehydes and onium ketones for **dyeing**
keratin fibers)

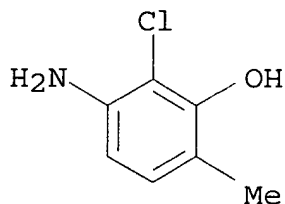
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
ICS D06P003-14; D06P003-30; C07D213-20
ICA C07D213-89; C07D213-48
CC 62-3 (Essential Oils and Cosmetics)
ST onium aldehyde alc amine **hair dye**; pyridinium
ketone alc amine **hair dye**
IT Amines, biological studies
(arom.; use of onium aldehydes and onium ketones for
dyeing keratin fibers)
IT **Hair** preparations
(**dyes**, oxidative; use of onium aldehydes and onium
ketones for **dyeing keratin** fibers)
IT **Hair** preparations
(**dyes**; use of onium aldehydes and onium ketones for
dyeing keratin fibers)
IT Heterocyclic compounds
(nitrogen, hydroxylated; use of onium aldehydes and onium ketones
for **dyeing keratin** fibers)
IT Alcohols, biological studies
Amines, biological studies
(primary; use of onium aldehydes and onium ketones for
dyeing keratin fibers)
IT Alcohols, biological studies
Amines, biological studies
(secondary; use of onium aldehydes and onium ketones for
dyeing keratin fibers)
IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of onium aldehydes and onium ketones for **dyeing**
keratin fibers)
IT Amino acids, biological studies
(.omega.-amino acids; use of onium aldehydes and onium ketones
for **dyeing keratin** fibers)
IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,

2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7, Fischer's base 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6 623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid 3784-97-2, 2-Formyl-1-methylpyridinium iodide 3855-78-5, 2,3,4-Trimethylpyrrole 4173-87-9 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole

5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic acid 5689-64-5, 4-Benzoyl-1-methylpyridinium bromide 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7216-42-4 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7630-04-8, 4-Acetyl-1-methylpyridinium iodide 7680-72-0 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7, 2-(2-Hydroxyethyl)phenol 13432-98-9 13441-53-7, 4-Formyl-1-methylpyridinium iodide 13441-54-8, 3-Formyl-1-methylpyridinium iodide 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline 14549-14-5, 2-Acetyl-1-methylpyridinium iodide **16082-33-0**, 3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine 21640-65-3 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 31937-78-7 32526-76-4 32526-77-5 34285-40-0, 4-Benzoyl-1-methylpyridinium iodide 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 60320-10-7 61224-35-9 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1 79190-74-2, 2-Formyl-1-methylpyridinium chloride 79352-72-0 80030-92-8 82228-89-5 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1** 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-6-methoxypyridine 91929-10-1 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 94442-49-6 104333-09-7 112270-26-5 114402-54-9 115423-86-4 117891-56-2 122438-75-9 122587-42-2 126335-41-9 128729-30-6 130582-56-8 135043-64-0 137290-86-9 144644-13-3 145571-38-6 159555-74-5 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9 220118-56-9 223383-77-5 223397-36-2 223397-37-3 223397-38-4 223397-39-5 223397-40-8 223397-41-9 223397-42-0 223397-43-1 223397-44-2 223397-45-3 223397-46-4 223397-47-5 223397-48-6 223397-49-7 223397-51-1 223397-52-2 223397-53-3 223397-54-4 223397-55-5 223397-56-6 223397-57-7 223397-58-8 223397-59-9 223397-60-2 223397-61-3 223397-62-4 223397-63-5

(use of onium aldehydes and onium ketones for dyeing keratin fibers)

| | | | | | |
|----|-------------|-------------|-------------|-------------|-------------|
| IT | 223397-64-6 | 223397-65-7 | 223397-67-9 | 223397-68-0 | 223397-69-1 |
| | 223397-70-4 | 223397-71-5 | 223397-72-6 | 223397-73-7 | 223397-74-8 |
| | 223397-75-9 | 223397-76-0 | 223397-77-1 | 223397-78-2 | 223397-79-3 |

| | | | | |
|-------------|-------------|-------------|-------------|-------------|
| 223397-80-6 | 223397-81-7 | 223397-82-8 | 223397-84-0 | 223397-85-1 |
| 223397-86-2 | 223397-87-3 | 223397-88-4 | 223397-89-5 | 223397-90-8 |
| 223397-91-9 | 223397-93-1 | 223397-94-2 | 223397-95-3 | 223397-96-4 |
| 223397-97-5 | 223397-98-6 | 223397-99-7 | 223398-00-3 | 223398-01-4 |
| 223398-02-5 | 223398-03-6 | 223398-04-7 | 223398-05-8 | 223398-06-9 |
| 223398-07-0 | 223398-08-1 | 223398-09-2 | 223398-10-5 | 223398-11-6 |
| 223398-12-7 | 223398-13-8 | 223398-15-0 | 223398-16-1 | 223398-17-2 |
| 223398-18-3 | 223398-19-4 | 223398-20-7 | 223398-21-8 | 223398-22-9 |
| 223398-23-0 | 223398-24-1 | 223398-25-2 | 223398-26-3 | 223398-27-4 |
| 223398-28-5 | 223398-29-6 | 223398-30-9 | 223398-31-0 | 223398-32-1 |
| 223398-33-2 | 223398-34-3 | 223398-36-5 | 223398-37-6 | 223398-38-7 |
| 223398-39-8 | 223398-40-1 | 223398-41-2 | 223398-42-3 | 223398-43-4 |
| 223398-45-6 | 223398-46-7 | 223398-47-8 | 223398-48-9 | 223398-49-0 |
| 223398-50-3 | 223398-51-4 | 223398-53-6 | 223398-54-7 | 223398-55-8 |
| 223398-56-9 | 223398-57-0 | 223398-58-1 | 223398-59-2 | 223398-60-5 |
| 223398-62-7 | 223398-63-8 | 223398-64-9 | 223398-65-0 | 223398-66-1 |
| 223398-67-2 | 223398-68-3 | 223398-69-4 | 223398-70-7 | 223398-71-8 |
| 223398-72-9 | 223398-73-0 | 223398-74-1 | 223398-75-2 | 223398-76-3 |
| 223398-77-4 | 223398-78-5 | 223398-79-6 | 223398-80-9 | 223398-81-0 |
| 223398-82-1 | 223398-83-2 | 223398-84-3 | 223398-85-4 | 223398-86-5 |
| 223398-87-6 | 223398-88-7 | 223405-51-4 | 223405-55-8 | 223405-56-9 |
| 223405-59-2 | 223405-61-6 | 223405-64-9 | 223405-66-1 | 223405-68-3 |
| 223405-70-7 | 223405-72-9 | 223405-75-2 | 223405-77-4 | 223405-79-6 |
| 223405-81-0 | 223405-83-2 | 223405-85-4 | 223405-88-7 | 223405-90-1 |
| 223405-93-4 | 223405-95-6 | 223405-98-9 | | |

(use of onium aldehydes and onium ketones for **dyeing**
keratin fibers)

L50 ANSWER 9 OF 22 HCA COPYRIGHT 2003 ACS on STN

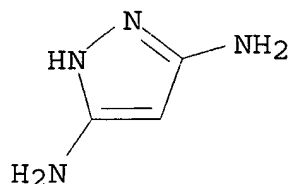
130:301486 Use of compositions containing dehydroascorbic acid for **dyeing** fibers containing **keratin**. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19745354 A1 19990415 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1997-19745354 19971014.

AB Combinations of dehydroascorbic acid with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of **dyes** for **hair**, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. **Dyeing** may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of dehydroascorbic acid 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray **hair** for 30 min at 30.degree. to produce an intense violet-brown **color**.

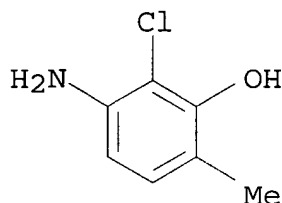
IT **16082-33-0**, 3,5-Diaminopyrazole **84540-50-1**
(use of compns. contg. dehydroascorbic acid for **dyeing**
keratin fibers)

RN 16082-33-0 HCA
CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)

Bad date



RN 84540-50-1 HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 ICS D06P003-14; D06P003-30; C07D307-62
 CC 62-3 (Essential Oils and Cosmetics)
 ST dehydroascorbate alc amine **hair dye**
 IT Amines, biological studies
 (arom.; use of compns. contg. dehydroascorbic acid for
 dyeing keratin fibers)
 IT **Hair** preparations
 (**dyes**, oxidative; use of compns. contg. dehydroascorbic
 acid for **dyeing keratin** fibers)
 IT **Hair** preparations
 (**dyes**; use of compns. contg. dehydroascorbic acid for
 dyeing keratin fibers)
 IT Heterocyclic compounds
 (nitrogen, hydroxylated; use of compns. contg. dehydroascorbic
 acid for **dyeing keratin** fibers)
 IT Alcohols, biological studies
 Amines, biological studies
 (primary; use of compns. contg. dehydroascorbic acid for
 dyeing keratin fibers)
 IT Alcohols, biological studies
 Amines, biological studies
 (secondary; use of compns. contg. dehydroascorbic acid for
 dyeing keratin fibers)
 IT Amino acids, biological studies
 Peptides, biological studies
 Phenols, biological studies
 (use of compns. contg. dehydroascorbic acid for **dyeing**
 keratin fibers)
 IT Amino acids, biological studies
 (.omega.-amino acids; use of compns. contg. dehydroascorbic acid

for dyeing keratin fibers)

IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7,
2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine,
biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5,
4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid
99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol
99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic
acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic
acid 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3,
1,3-Benzenediol, biological studies 108-72-5, 1,3,5-
Triaminobenzene 108-73-6, Phloroglucinol 118-70-7,
4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9,
1,2-Benzenediol, biological studies 121-47-1, 3-
Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9,
1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic
acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol
150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 490-83-5D, derivs., acetals
496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol
504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine
504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole
533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone
535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-
Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6,
3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2,
2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6 623-09-6, 4-Methylaminoaniline 636-25-9,
2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole
1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole
1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium

p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 60320-10-7 61224-35-9 61693-42-3 62496-02-0, 2-(Methylamino)-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 80030-92-8 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-6-methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7 114402-54-9 115423-86-4 126335-41-9 128729-30-6 130582-56-8 137290-86-9 144644-13-3 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9 220118-56-9 223383-77-5

(use of compns. contg. dehydroascorbic acid for **dyeing** keratin fibers)

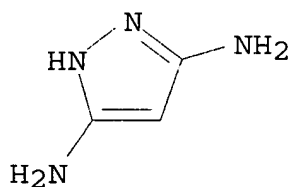
L50 ANSWER 10 OF 22 HCA COPYRIGHT 2003 ACS on STN
 130:301484 Use of malonaldehyde derivatives for **dyeing** fibers containing **keratin**. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19745292 A1 19990415, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1997-19745292 19971014.

AB Combinations of malonaldehyde derivs. (R1O)2CHCHR3CH(OR2)2 or

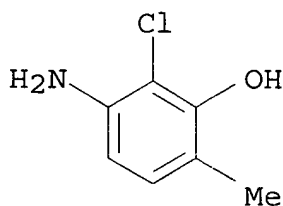
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HC.tplbond.CCH(OR1)(OR2) [R1, R2 = C1-6 alkyl; R3 = H, C1-4 alkyl or alkoxy, hydroxyalkoxy, (substituted) aryl or heteroaryl; any 2 of R1-R3 may complete a 5-7-membered ring] with .gtoreq.1 compd. contg. a primary or secondary amino or OH group and/or .gtoreq.1 CH-active compd., or their reaction products, are useful for prodn. of **dyes** for **hair**, wool, furs, and synthetic fibers without requiring the use of oxidizing agents such as H2O2. The amines and hydroxy compds. may include N-heterocycles, amino acids, oligopeptides, and arom. hydroxy compds. **Dyeing** may be enhanced by addn. of ammonium or metal salts. Thus, a mixt. of malonaldehyde bis(di-Et acetal) 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. was suspended in 100 mL water, heated briefly to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray **hair** for 30 min at 30.degree. to produce an intense brown-orange **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
 (use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
 RN 16082-33-0 HCA
 CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 ICS C07C043-303; D06P003-04; C07D321-00
 ICA C07C211-00; C07C215-00; D06P003-14; D06P003-30
 CC 62-3 (Essential Oils and Cosmetics)
 ST malonaldehyde alc amine **hair dye**; propyne acetal
 alc amine **hair dye**
 IT Amines, biological studies
 (arom.; use of malonaldehyde derivs. for **dyeing** fibers
 contg. **keratin**)
 IT **Hair** preparations

- (**dyes**, oxidative; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT **Hair** preparations
(**dyes**; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT Heterocyclic compounds
(nitrogen, hydroxylated; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT Amino acids, biological studies
(.omega.-amino acids; use of malonaldehyde derivs. for **dyeing** fibers contg. **keratin**)
- IT 59-48-3, Oxindole 62-53-3D, Aniline, derivs. 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 102-52-3, Malonaldehyde bis(dimethyl acetal) 106-50-3, 1,4-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-12-7, Fischer's base 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-72-9D, Indole, derivs. 120-80-9, 1,2-Benzenediol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3 122-31-6, Malonaldehyde bis(diethyl acetal) 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol

150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 542-78-9D, Malonaldehyde,
derivs., acetals 578-66-5, 8-Aminoquinoline 580-17-6,
3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3 610-74-2,
2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6 623-09-6, 4-Methylaminoaniline 624-67-9D, 2-Propynal,
acetals 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0,
3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5418-63-3, 1,2,3,3-Tetramethyl-3H-
indolium iodide 5434-20-8, 3-Aminophthalic acid 5718-83-2,
Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2,
4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7169-34-8,
Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 10160-87-9,
3,3-Diethoxy-1-propyne 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-
phenylenediamine 22537-06-0, 3,3-Dimethoxy-1-propyne 22715-34-0,
2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2 28020-38-4,

2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
 39567-92-5 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine
 sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate
 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5
 59845-59-9 60320-10-7 61224-35-9 61693-42-3 62496-02-0,
 2-(Methylamino)-4,5,6-triaminopyrimidine 65099-93-6 65099-94-7,
 Malonaldehyde bis(dibutyl acetal) 66566-48-1 66635-40-3
 69549-51-5 69984-77-6, 7-Aminobenzimidazole 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 80030-92-8
 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine
84540-50-1 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
 85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-(methylamino)-
 6-methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
 93841-25-9 104333-09-7 114402-54-9 115423-86-4 126335-41-9
 128729-30-6 130582-56-8 135043-64-0 137290-86-9 144644-13-3
 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9
 220118-56-9 223383-77-5 223399-01-7 223399-02-8 223399-03-9

(use of malonaldehyde derivs. for **dyeing** fibers contg.
keratin)

L50 ANSWER 11 OF 22 HCA COPYRIGHT 2003 ACS on STN

130:227506 Oxidative **hair dyes** comprising

2-chloro-6-methyl-3-aminophenol and two oxidation bases. Audousset,
 Marie-Pascale (L'Oreal, Fr.). PCT Int. Appl. WO 9911229 A1
 19990311, 37 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB,
 BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM,
 HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
 LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
 SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG,
 KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE,
 DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE,
 SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION: WO 1998-FR1561
 19980716. PRIORITY: FR 1997-10855 19970901.

AB Oxidative **hair dyes** for **keratin**

fibers, in particular human **keratin** fibers such as
hair, comprising 2-chloro 6-Me 3-aminophenol (I) as coupler,
 combined with at least two oxidn. bases different from each other,
 and the **dyeing** method using said **dyeing** compn.
 with an oxidizing agent are claimed. A **hair dye**
 prepn. contained I 1.182, paraphenylenediamine 0.81,
 tetra-aminopyrimidine sulfate 0.13, excipients and water q.s. 100 g.
 Equal amts. of the **dye** is mixed with 10 vol. hydrogen
 peroxide and applied on the **hair**.

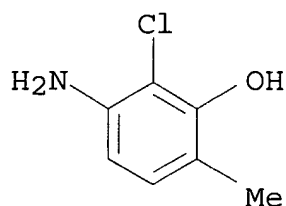
IT **84540-50-1**, 2-Chloro 6-methyl 3-aminophenol
221110-59-4

(oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)

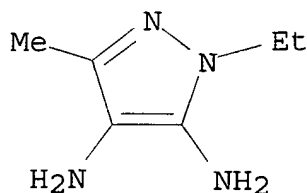
RN **84540-50-1** HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)

6379396



RN 221110-59-4 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl-, dihydrochloride (9CI)
 (CA INDEX NAME)



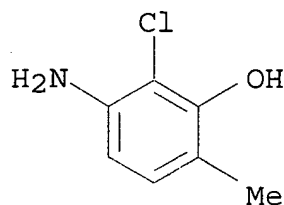
● 2 HCl

IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** chloromethylaminophenol
 oxidant
 IT Alcohols, biological studies
 (aralkyl; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)
 IT **Hair** preparations
 (creams; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)
 IT **Hair** preparations
 (**dyes**, oxidative; oxidative **hair dyes**
 comprising chloromethylaminophenol and two oxidn. bases)
 IT Glycols, biological studies
 (ethers; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)
 IT **Hair** preparations
 (gels; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)
 IT Ethers, biological studies
 (glycol; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)
 IT Solvents
 (org.; oxidative **hair dyes** comprising
 chloromethylaminophenol and two oxidn. bases)

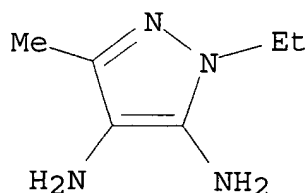
- IT Coupling agents
Oxidizing agents
(oxidative **hair dyes** comprising
chloromethylaminophenol and two oxidn. bases)
- IT Glycols, biological studies
Peroxy acids
Peroxysulfates
(oxidative **hair dyes** comprising
chloromethylaminophenol and two oxidn. bases)
- IT Group IIIA element compounds
(perborates; oxidative **hair dyes** comprising
chloromethylaminophenol and two oxidn. bases)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 92-65-9 93-05-0
95-55-6 95-70-5 99-98-9 101-54-2 106-50-3,
1,4-Benzenediamine, biological studies 110-86-1D, Pyridine,
derivs., biological studies 123-30-8 124-43-6 148-71-0
288-13-1D, Pyrazole, derivs. 289-95-2D, Pyrimidine, derivs.
399-95-1, 4-Amino-3-fluoro phenol 399-96-2, 4-Amino-2-fluorophenol
537-65-5 615-66-7 1630-11-1 2359-52-6 2359-53-7 2835-96-3,
4-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol
2835-99-6, 4-Amino-3-methyl phenol 5306-96-7 5862-80-6
6393-01-7 7218-02-2 7575-35-1 7722-84-1, Hydrogen peroxide
(H₂O₂), biological studies 14791-78-7 17672-22-9,
2-Amino-6-methylphenol 29785-47-5, 4-Amino-2-methoxymethylphenol
49647-58-7 54381-16-7 63969-43-7 66566-48-1 73793-80-3
79352-72-0 80467-77-2 **84540-50-1**, 2-Chloro 6-methyl
3-aminophenol 93841-24-8 97902-52-8 104333-09-7 105293-89-8
105607-68-9 110952-46-0 126335-43-1 128729-28-2 128729-30-6
128729-31-7 129697-50-3 130582-53-5 135855-34-4 135855-35-5
168202-61-7 201599-07-7 207568-58-9 221110-58-3
221110-59-4
(oxidative **hair dyes** comprising
chloromethylaminophenol and two oxidn. bases)
- L50 ANSWER 12 OF 22 HCA COPYRIGHT 2003 ACS on STN
- 130:227505 Oxidative **hair dyes** comprising
chloromethylaminophenol, an oxidation base and an additional
coupler. Audousset, Marie-Pascale (L'Oreal, Fr.). PCT Int. Appl.
WO 9911228 A1 19990311, 43 pp. DESIGNATED STATES: W: AL, AM, AT,
AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI,
GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW,
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH,
CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR,
NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION:
WO 1998-FR1560 19980716. PRIORITY: FR 1997-10856 19970901.
- AB An oxidn. **dyeing** compn. for **keratin** fibers, in
particular human **keratin** fibers such as **hair**,
comprising 2-chloro-6-methyl-3-aminophenol (I) as coupler, combined
with at least one appropriately selected oxidn. base and at least
one addnl. coupler chosen among appropriately selected

meta-aminophenols and meta-phenylenediamine, and the **dyeing** method using said compn. with an oxidizing agent. A **hair dye** prepn. contained I 1.17, 2-.beta.-hydroxyethyloxyparaphenylenediamine 1.8, 2-methyl-5-aminophenol 0.05, excipients and water q.s. 100 g. Equal amts. of the **dye** is mixed with 10 vol. hydrogen peroxide and applied on the **hair**.

IT **84540-50-1**, 2-Chloro 6-methyl 3-aminophenol
221110-59-4
 (oxidative **hair dyes** comprising
 chloromethylaminophenol, oxidn. base and addnl. coupler)
 RN **84540-50-1** HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



RN **221110-59-4** HCA
 CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl-, dihydrochloride (9CI)
 (CA INDEX NAME)



●2 HCl

IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** chloromethylaminophenol
 oxidant coupler
 IT Alcohols, biological studies
 (Cl-4; oxidative **hair dyes** comprising
 chloromethylaminophenol, oxidn. base and addnl. coupler)
 IT Alcohols, biological studies
 (aralkyl; oxidative **hair dyes** comprising
 chloromethylaminophenol, oxidn. base and addnl. coupler)
 IT **Hair** preparations
 (creams; oxidative **hair dyes** comprising

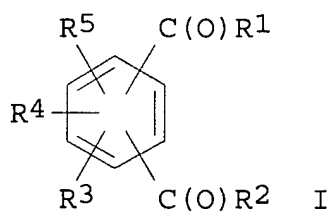
- chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT **Hair preparations**
(**dyes**, oxidative; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Glycols, biological studies
(ethers; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT **Hair preparations**
(gels; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Ethers, biological studies
(glycol; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Solvents
(org.; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Coupling agents
Oxidizing agents
(oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Glycols, biological studies
Peroxy acids
Peroxy sulfates
(oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT Group IIIA element compounds
(perborates; oxidative **hair dyes** comprising chloromethylaminophenol, oxidn. base and addnl. coupler)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 92-65-9 93-05-0
95-55-6 95-70-5 99-98-9 101-54-2 106-50-3,
1,4-Benzenediamine, biological studies 108-45-2,
1,3-Benzenediamine, biological studies 110-86-1D, Pyridine,
derivs., biological studies 123-30-8 124-43-6 148-71-0
288-13-1D, Pyrazole, derivs. 289-95-2D, Pyrimidine, derivs.
399-95-1, 4-Amino-3-fluoro phenol 399-96-2, 4-Amino-2-fluorophenol
537-65-5 591-27-5 615-66-7 1630-11-1 2359-52-6 2359-53-7
2835-95-2 2835-96-3, 4-Amino-2-methylphenol 2835-98-5,
2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methyl phenol
5306-96-7 5862-77-1 5862-80-6 6393-01-7 7218-02-2
7575-35-1 7722-84-1, Hydrogen peroxide (H₂O₂), biological studies
14791-78-7 17672-22-9, 2-Amino-6-methylphenol 29785-47-5,
4-Amino-2-methoxymethylphenol 55302-96-0 63969-43-7 66422-95-5
66566-48-1 66583-79-7 70643-19-5 73793-80-3 74918-21-1
75513-65-4 78661-33-3 79352-72-0 80467-77-2 81892-72-0
83763-47-7 **84540-50-1**, 2-Chloro 6-methyl 3-aminophenol
86817-42-7 93841-24-8 97902-52-8 104333-09-7 104752-49-0
104752-50-3 105293-89-8 105607-68-9 110102-86-8 110952-46-0
114109-54-5 115423-85-3 126335-43-1 128729-30-6 128729-31-7
129697-50-3 130582-53-5 135855-34-4 135855-35-5 137290-78-9
137290-86-9 141614-04-2 141614-05-3 146658-65-3 160950-38-9
168092-23-7 168202-61-7 201599-07-7 207568-58-9 221110-58-3

221110-59-4

(oxidative **hair dyes** comprising
chloromethylaminophenol, oxidn. base and addnl. coupler)

L50 ANSWER 13 OF 22 HCA COPYRIGHT 2003 ACS on STN
130:143947 Application of di-and oligoacyl aromatic compounds for
dyeing keratin fibers. Moeller, Hinrich;
Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE
19731400 A1 19990128, 12 pp. (German). CODEN: GWXXBX.
APPLICATION: DE 1997-19731400 19970722.

GI

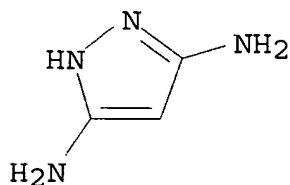
bad date

AB The title compds. (I; R1, R2 = C1-4 alkyl, aryl, heteroaryl; R3-R5 = H, halo, C1-4 alkyl, C1-4 alkoxy, C1-4 hydroxyalkoxy, OH, NO2, NH2, C1-4 acyl; R1 and R2 may not be 1,2-diacetyl), combined with primary or secondary amines or OH compds. and active CH compds., are useful as **hair dyes** which do not require the use of an oxidizing agent. These **dyes** provide excellent brilliance and depth of **color** with many **color** nuances. Thus, a mixt. of 1,4-diacetylbenzene 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate soln. in 100 mL H2O was heated to 80.degree., cooled, filtered, adjusted to pH 6, and applied to gray **hair** for 30 min at 30.degree. to produce a dark violet **color**.

IT **16082-33-0**, 3,5-Diaminopyrazole **84540-50-1**
(application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)

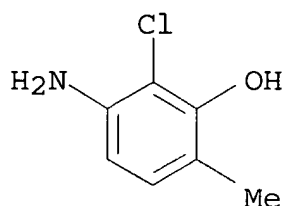
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
ICS D06P003-08
- CC 62-3 (Essential Oils and Cosmetics)
- ST acyl arom **hair dye**; acetylbenzene **hair dye**
- IT Amino acids, biological studies
Hydroxy compounds
Peptides, biological studies
(application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Amines, biological studies
(arom.; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Amines, biological studies
Amines, biological studies
(aryl, secondary; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Hydroxy compounds
(aryl; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT **Hair** preparations
(**dyes**; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Heterocyclic compounds
(nitrogen; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Amines, biological studies
(primary; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT Amines, biological studies
(secondary; application of di-and oligoacyl arom. compds. for **dyeing keratin** fibers)
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7, 2,4,6-Trihydroxybenzoic acid 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, 1,2-Benzenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid

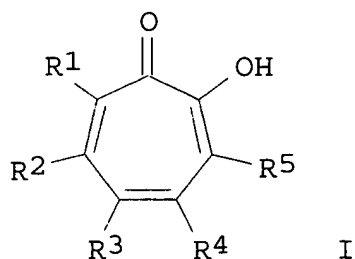
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99-50-3, 3,4-Dihydroxybenzoic acid 101-80-4 102-32-9,
3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,
biological studies 108-46-3, 1,3-Benzenediol, biological studies
108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol
118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid
120-80-9, 1,2-Benzenediol, biological studies 121-47-1,
3-Aminobenzenesulfonic acid 121-57-3 123-30-8 123-31-9,
1,4-Benzenediol, biological studies 141-84-4, Rhodanine
141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological
studies 150-13-0, 4-Aminobenzoic acid 150-19-6, 3-Methoxyphenol
150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol
156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine
462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3,
1-Ethylquinaldinium iodide 608-25-3 610-74-2, 2,5-Diaminobenzoic
acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3,
4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6
623-09-6, 4-Methylaminoaniline 636-25-9, 2,5-Diaminophenol
704-00-7, 1,2-Diacetylbenzene 779-90-8, 1,3,5-Triacetylbenzene
876-87-9, 1-Methylquinaldinium iodide 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1009-61-6,
1,4-Diacetylbenzene 1123-55-3, 7-Aminobenzothiazole 1123-93-9,
5-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3,
4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole
1571-72-8, 3-Amino-4-hydroxybenzoic acid 1770-96-3 1820-80-0,
3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2767-73-9
2785-06-0, 2,3-Dimethylbenzothiazolium iodide 2835-99-6,
3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 1H-Benzimidazol-4-amine 4506-66-5,
1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2
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5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole
5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5392-28-9 5418-63-3,
1,2,3,3-Tetramethyl-3H-indolium iodide 5434-20-8, 3-Aminophthalic
acid 5718-83-2, Rhodanine-3-acetic acid 5959-52-4,
3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol 6259-50-3

6399-72-0 6628-04-2, 4-Aminoquinaldine 6781-42-6,
 1,3-Diacetylbenzene 6967-12-0, 6-Aminoindazole 7169-34-8,
 Coumaranone 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
 phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
 7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3,
 4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
 2-Amino-3-hydroxypyridine 18019-57-3 19335-11-6, 5-Aminoindazole
 20103-09-7, 2,5-Dichloro-p-phenylenediamine 20724-48-5
 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
 2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
 naphthalenedisulfonic acid 24119-24-2 25394-13-2, Sodium
 4,4'-diaminostilbene-2,2'-disulfonate 28020-38-4,
 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
 33630-99-8, 3-Amino-2-hydroxypyridine 41927-50-8 41946-53-6
 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate
 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5
 60320-10-7 61224-35-9 61693-42-3 62496-02-0,
 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3
 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-
 Diaminophenoxyethanol 74918-21-1 79352-72-0 83732-72-3
 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**
 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 89725-66-6 90817-30-4 90817-34-8,
 3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7
 115423-86-4 126335-41-9 128729-30-6 130582-56-8 131212-31-2
 135043-64-0 137290-86-9 144644-13-3 147801-94-3 147801-97-6
 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9
 220118-52-5 220118-53-6 220118-56-9

(application of di-and oligoacyl arom. compds. for **dyeing**
keratin fibers)

L50 ANSWER 14 OF 22 HCA COPYRIGHT 2003 ACS on STN *hw us,*
 129:347139 Use of tropolones for **dyeing keratin**
 fibers. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A.,
 Germany). Ger. Offen. DE 19717225 A1 **19981029**, 10 pp.
 (German). CODEN: GWXXBX. APPLICATION: DE 1997-19717225 19970424.

GI

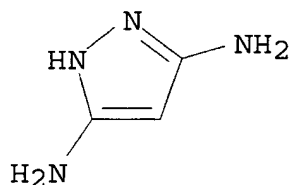


AB Tropolone derivs. [I; R1-R5 = H, halo, C1-4 alkyl; or R1R2 completes a (substituted) condensed benzo group] are components of nonoxidative or oxidative **hair dyes** with improved intensity and fastness toward light, washing, and friction and cause little or no skin sensitization. I are applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce yellow, orange, brown, blue-black, and black **colorations**. Thus, purpurogallin 10, 2,4,5,6-tetraaminopyrimidine sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray **hair** exposed to this soln. for 30 min at 30.degree. took on an orange-brown **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
(use of tropolones for **dyeing keratin** fibers)

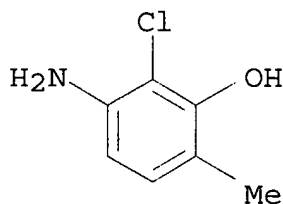
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

ICS C07C049-717; C07C049-733; C07C211-00; C07C037-00; D06P003-04;
D06P003-08

ICA D06P003-14; D06P003-30

CC 62-3 (Essential Oils and Cosmetics)

ST tropolone deriv **hair dye**

IT Amines, biological studies

(arom.; use of tropolones for **dyeing keratin** fibers)

IT Amines, biological studies

Amines, biological studies

(aryl, secondary; use of tropolones for **dyeing**)

- keratin fibers)
- IT Hair preparations
(dyes, oxidative; use of tropolones for dyeing
keratin fibers)
- IT Hair preparations
(dyes; use of tropolones for dyeing
keratin fibers)
- IT Heterocyclic compounds
(nitrogen; use of tropolones for dyeing keratin
fibers)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of tropolones for dyeing keratin
fibers)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of tropolones for dyeing
keratin fibers)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of tropolones for dyeing keratin fibers)
- IT 144644-13-3
(use of benzylidene ketones for dyeing keratin
fibers)
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7,
Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,
biological studies 95-55-6, 2-Aminophenol 95-70-5,
2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-
Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-
Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,
biological studies 108-45-2, 1,3-Benzenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2
118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid
119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0,
4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol,
biological studies 121-47-1, 3-Aminobenzenesulfonic acid
121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9,
1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0 150-19-6,
3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,

4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 363-67-7,
3,5,7-Tribromotropolone 452-58-4, 2,3-Diaminopyridine 462-08-8,
3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol
496-73-1, 4-Methylresorcinol 499-44-5, Hinokitiol 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 533-75-5, Tropolone 535-87-5,
3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine
569-77-7, Purpurogallin 569-77-7D, Purpurogallin, Me ethers
578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-
Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol
876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6,
2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6,
5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 2885-58-7, 3,5,7-Trimethyltropolone 3131-52-0,
5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid
3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole
4318-76-7, 2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole
4506-66-5, 1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2
5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0,
5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole
5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid
5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic
acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0
6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-
2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3,
4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
2-Amino-3-hydroxypyridine 19335-11-6, 5-Aminoindazole
20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0,
2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2 28020-38-4,

2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41927-50-8 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine
sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate
55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5
58262-44-5 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6,
7-Aminobenzimidazole 70643-19-5, 2,4-Diaminophenoxyethanol
74918-21-1 79352-72-0 83732-72-3 84540-47-6,
2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**
85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-
methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
93841-25-9 104333-09-7 110102-86-8 114402-54-9 115423-86-4
128729-30-6 130582-56-8 137290-86-9 159661-42-4 202525-71-1
202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7
202525-78-8 202525-79-9 215377-52-9 215377-53-0 215377-55-2
215377-56-3 215526-02-6

(use of tropolones for **dyeing keratin** fibers)

L50 ANSWER 15 OF 22 HCA COPYRIGHT 2003 ACS on STN

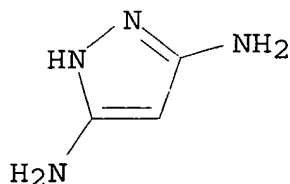
129:347138 Use of amino vinyl aldehydes and ketones for **dyeing**
keratin fibers. Moeller, Hinrich; Hoeffkes, Horst;
Meinigke, Bernd (Henkel Kommanditgesellschaft Auf Aktien, Germany).
Eur. Pat. Appl. EP 873746 A2 **19981028**, 16 pp. DESIGNATED
STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW.
APPLICATION: EP 1998-106959 19980416. PRIORITY: DE 1997-19717223
19970424.

AB The title compds., R1R2N(CR3:CR4)nCR5:CR6C(O)R7 [I; R1, R2 = H,
alkyl, hydroxyalkyl, (substituted) Ph, or R1NR2 = heterocyclic ring;
R3-R7 = H, C1-4 alkyl, halo; n = 0-2; if n = 1, R4 and R6, or R6 and
R7, may together form a ring], are components of nonoxidative or
oxidative **hair dyes** which provide an intensity
and fastness of **color** comparable to conventional oxidative
dyes and cause little or no skin sensitization. I alone
impart **hair colors** mainly in the yellow spectral
region; I may be applied together with primary or secondary amines,
N-heterocyclic compds., arom. OH compds., or compds. with active CH
groups to produce yellow, orange, brown, and black
coloration. Thus, 3-dimethylaminoacrolein 10,
2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty
alkyl ether sulfate were suspended in 100 mL H2O, the suspension was
heated briefly to 80.degree., cooled, and filtered, and the pH was
adjusted to 6. Gray **hair** exposed to this soln. for 30 min
at 30.degree. took on a reddish-brown **color**.

IT **16082-33-0**, 3,5-Diaminopyrazole **84540-50-1**
(use of amino vinyl aldehydes and ketones for **dyeing**
keratin fibers)

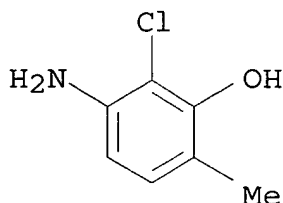
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST amino vinyl ketone **hair dye**; aldehyde amino vinyl **hair dye**

IT Amines, biological studies

Amines, biological studies

(amino aldehydes; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT Aldehydes, biological studies

Aldehydes, biological studies

Ketones, biological studies

Ketones, biological studies

(amino; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT Amines, biological studies

(arom.; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT Amines, biological studies

Amines, biological studies

(aryl, secondary; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT **Hair preparations**

(**dyes**, oxidative; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT **Hair preparations**

(**dyes**; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

IT Amines, biological studies

Amines, biological studies

(keto; use of amino vinyl aldehydes and ketones for **dyeing keratin fibers**)

- IT Heterocyclic compounds
(nitrogen; use of amino vinyl aldehydes and ketones for **dyeing keratin** fibers)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of amino vinyl aldehydes and ketones for **dyeing keratin** fibers)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of amino vinyl aldehydes and ketones for **dyeing keratin** fibers)
- IT Aldehydes, biological studies
Ketones, biological studies
(unsatd.; use of amino vinyl aldehydes and ketones for **dyeing keratin** fibers)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of amino vinyl aldehydes and ketones for **dyeing keratin** fibers)
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-15-1, Indoline 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,

2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3,
3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5,
3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine
578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-
Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol
876-87-9 927-63-9, 3-Dimethylaminoacrolein 934-22-5,
5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1190-91-6
1197-55-3, 4-Aminophenylacetic acid 1455-77-2,
3,5-Diamino-1,2,4-triazole 1497-49-0 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4030-58-4 4318-76-7,
2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole 4506-66-5,
1,2,4,5-Tetraaminobenzene tetrahydrochloride 4688-60-2,
5-Dimethylamino-2,4-pentadienal 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid
5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic
acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0
6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-
2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 13044-92-3,
7-Dimethylamino-2,4,6-heptatrienal 13754-19-3,
4,5-Diaminopyrimidine 14189-80-1 14189-81-2 14189-83-4
14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
17774-41-3 19125-78-1 19335-11-6, 5-Aminoindazole 20103-09-7,
2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-
triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine
23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid
24119-24-2 25186-34-9, 3-Aminoacrolein 25920-13-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41927-50-8 41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine
sulfate 53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate

55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5
 58064-22-5 58262-44-5 60159-98-0 61693-42-3 62496-02-0,
 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1 66635-40-3
 69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-
 Diaminophenoxyethanol 74918-21-1 76319-97-6 79352-72-0
 83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine
~~84540-50-1~~ 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
 85926-99-4, 4-Hydroxyindoline 89728-31-4 90817-34-8,
 3-Amino-2-methylamino-6-methoxypyridine 90945-00-9 93841-24-8,
 2-(2,5-Diaminophenyl)ethanol 93841-25-9 104333-09-7
 110102-86-8 114402-54-9 115423-86-4 128729-30-6 130582-56-8
 135043-64-0 137290-86-9 144644-13-3 147920-20-5 159661-42-4
 202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6
 202525-77-7 202525-78-8 202525-79-9 215377-52-9 215377-53-0
 215377-55-2 215377-56-3 215523-40-3 215523-41-4 215523-42-5
 215523-44-7 215523-54-9

(use of amino vinyl aldehydes and ketones for **dyeing**
keratin fibers)

L50 ANSWER 16 OF 22 HCA COPYRIGHT 2003 ACS on STN

129:347137 Ketones and aldehydes for **dyeing keratin**

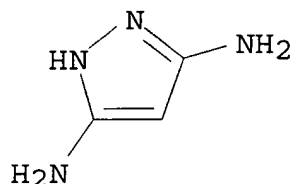
fibers. Moeller, Hinrich; Hoeffkes, Horst; Meinigke, Bernd (Henkel
 Kommanditgesellschaft Auf Aktien, Germany). Eur. Pat. Appl. EP
 873745 A2 **19981028**, 14 pp. DESIGNATED STATES: R: AT, BE,
 CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT,
 LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP 1998-106833
 19980415. PRIORITY: DE 1997-19717222 19970424.

AB Nonoxidative or oxidative **hair dye** compns. are
 provided which contain (a) .gtoreq.1 ketone and/or aldehyde which
dyes hair either alone or in the presence of (b)
 .gtoreq.1 compd. with a primary or secondary amino or hydroxy group,
 together with (c) a **color**-reinforcing agent comprising
 piperidine, pyridine, imidazole, pyrrolidine, pyrrolidone, pyrazole,
 triazole, piperidazine, or their derivs. or salts. These compns.
 provide an intensity and fastness of **color** comparable to
 conventional oxidative **dyes** and cause little or no skin
 sensitization. These compns. impart **hair colors**
 over a wide spectral range, from yellow-orange to brown-black.
 Thus, a suspension of glutaconaldehyde Na salt 10,
 2-(2,5-diaminophenyl)ethanol sulfate 10, piperidine 10, NaOAc 10
 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100
 mL H2O, the suspension was heated briefly to 80.degree., cooled, and
 filtered, and the pH was adjusted to 6. Gray **hair** exposed
 to this soln. for 30 min at 30.degree. took on an intense red-violet
color.

IT **16082-33-0**, 3,5-Diaminopyrazole **84540-50-1**
 (ketones and aldehydes for **dyeing keratin**
 fibers)

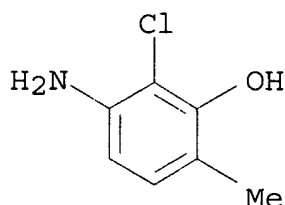
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST ketone amine alc **hair dye**; aldehyde amine alc
hair dye

IT Ketones, biological studies
(1,2-diketones; ketones and aldehydes for **dyeing**
keratin fibers)

IT Dicarbonyl compounds
(1,3-dicarbonyl; ketones and aldehydes for **dyeing**
keratin fibers)

IT Aldehydes, biological studies
Amines, biological studies
(arom.; ketones and aldehydes for **dyeing**
keratin fibers)

IT Amines, biological studies
Amines, biological studies
(aryl, secondary; ketones and aldehydes for **dyeing**
keratin fibers)

IT **Hair** preparations
(**dyes**, oxidative; ketones and aldehydes for
dyeing keratin fibers)

IT **Hair** preparations
(**dyes**; ketones and aldehydes for **dyeing**
keratin fibers)

IT Aldehydes, biological studies
Aldehydes, biological studies
(heteroaryl; ketones and aldehydes for **dyeing**
keratin fibers)

IT Aldehydes, biological studies
Amino acids, biological studies
Ketones, biological studies

Peptides, biological studies
 Phenols, biological studies
 (ketones and aldehydes for **dyeing keratin** fibers)
 IT Heterocyclic compounds
 (nitrogen; ketones and aldehydes for **dyeing keratin** fibers)
 IT Alcohols, biological studies
 Amines, biological studies
 (primary; ketones and aldehydes for **dyeing keratin** fibers)
 IT Alcohols, biological studies
 Amines, biological studies
 (secondary; ketones and aldehydes for **dyeing keratin** fibers)
 IT 50-71-5, Alloxan 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 91-56-5, Isatin 91-56-5D, Isatin, derivs. 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 106-51-4D, p-Quinone, derivs. 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 110-86-1, Pyridine, biological studies 110-86-1D, Pyridine, derivs., biological studies 110-89-4, Piperidine, biological studies 110-89-4D, Piperidine, derivs., biological studies 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 123-75-1, Pyrrolidine, biological studies 123-75-1D, Pyrrolidine, derivs., biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 288-13-1, Pyrazole 288-13-1D, Pyrazole, derivs. 288-32-4, Imidazole, biological studies 288-32-4D, Imidazole, derivs. 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 485-47-2, Ninhydrin

485-47-2D, Ninhydrin, derivs. 488-87-9, 2,5-Dimethylresorcinol
496-73-1, 4-Methylresorcinol 496-76-4, Isobarbituric acid
498-94-2, Piperidine-4-carboxylic acid 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 505-19-1, Piperidazine
505-19-1D, Piperidazine, derivs. 517-22-6, 2,4-Dimethyl-3-
ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3,
Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5,
4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6,
3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 583-63-1D, o-Quinone, derivs. 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-
Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-
phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 616-45-5,
2-Pyrrolidone 619-05-6, 3,4-Diaminobenzoic acid 623-09-6
636-25-9, 2,5-Diaminophenol 934-22-5, 5-Aminobenzimidazole
1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole
1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 4-Aminobenzimidazole 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5318-27-4,
6-Aminoindole 5345-47-1, 2-Aminonicotinic acid 5434-20-8,
3-Aminophthalic acid 5718-83-2, Rhodanine-3-acetic acid
5959-52-4, 3-Amino-2-naphthoic acid 6201-65-6, 2-Chlororesorcinol
6259-50-3 6399-72-0 6628-04-2, 4-Aminoquinaldine 6967-12-0,
6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1, Disodium
4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6 7575-35-1,
N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-
phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine
23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7,
3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2
24290-36-6 25186-34-9D, 3-Aminoacrolein, derivs. 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline

37306-44-8, Triazole 37306-44-8D, Triazole, derivs. 41927-50-8
 41946-53-6 53666-79-8 55302-96-0, 2-Methyl-5-(2-
 hydroxyethylamino)phenol 56216-28-5 60320-10-7 61693-42-3
 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1
 66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5,
 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 83732-72-3
 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**
 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-
 methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
 93841-25-9 104333-09-7 110102-86-8 114402-54-9 115423-86-4
 128729-30-6 130582-56-8 137290-86-9 159661-42-4 202525-71-1
 202525-73-3 202525-74-4 202525-75-5 202525-76-6 202525-77-7
 202525-78-8 202525-79-9 215377-52-9 215377-53-0 215377-55-2
 215377-56-3

(ketones and aldehydes for **dyeing keratin**
 fibers)

IT 149-87-1

(ketones and aldehydes for **dyeing keratin**
 fibers)

IT 144644-13-3

(use of benzylidene ketones for **dyeing keratin**
 fibers)

L50 ANSWER 17 OF 22 HCA COPYRIGHT 2003 ACS on STN

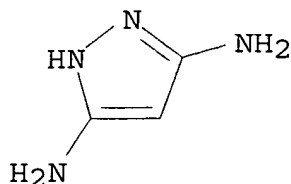
129:347136 Use of heterocyclic carbonyl compounds for **dyeing**
keratin fibers. Moeller, Hinrich; Hoeffkes, Horst;
 Meinigke, Bernd (Henkel Kommanditgesellschaft Auf Aktien, Germany).
 Eur. Pat. Appl. EP 873744 A2 **19981028**, 18 pp. DESIGNATED
 STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 PT, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP
 1998-106832 19980415. PRIORITY: DE 1997-19717280 19970424.

AB Heterocyclic carbonyl compds. RXC(O)R1 [R = 5-7-membered
 (substituted) heterocyclic ring with 1-3 hetero atoms (N, O, S); X =
 bond, CH:CH; R1 = H, (substituted) C1-6 alkyl] are components of
 nonoxidative or oxidative **hair dyes** which
 provide an intensity and fastness of **color** comparable to
 oxidative **dyes** and cause little or no skin sensitization.
 These compds. alone impart **hair colors** mainly in
 the yellow and red spectral regions; they may be applied together
 with primary or secondary amines, N-heterocyclic compds., arom. OH
 compds., or compds. with active CH groups to produce yellow, orange,
 brown, and black **colorations** with improved brilliance and
 fastness. Thus, a suspension of indole-3-aldehyde 10,
 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty
 alkyl ether sulfate were suspended in 100 mL H2O, the suspension was
 heated briefly to 80.degree., cooled, and filtered, and the pH was
 adjusted to 6. Gray **hair** exposed to this soln. for 30 min
 at 30.degree. took on an intense brown **color**.

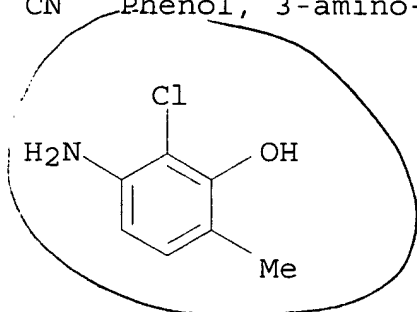
IT 16082-33-0, 3,5-Diaminopyrazole **84540-50-1**

(use of heterocyclic carbonyl compds. for **dyeing**
keratin fibers)

RN 16082-33-0 HCA
 CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA
 CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST heterocyclic carbonyl compd **hair dye**
 IT Amines, biological studies
 (arom.; use of heterocyclic carbonyl compds. for **dyeing**
 keratin fibers)
 IT Amines, biological studies
 Amines, biological studies
 (aryl, secondary; use of heterocyclic carbonyl compds. for
 dyeing keratin fibers)
 IT **Hair** preparations
 (**dyes**, oxidative; use of heterocyclic carbonyl compds.
 for **dyeing keratin** fibers)
 IT **Hair** preparations
 (**dyes**; use of heterocyclic carbonyl compds. for
 dyeing keratin fibers)
 IT Aldehydes, biological studies
 Ketones, biological studies
 (heterocyclic; use of heterocyclic carbonyl compds. for
 dyeing keratin fibers use of heterocyclic
 carbonyl compds. for **dyeing keratin** fibers)
 IT Heterocyclic compounds
 (nitrogen; use of heterocyclic carbonyl compds. for
 dyeing keratin fibers)
 IT Alcohols, biological studies
 Amines, biological studies
 (primary; use of heterocyclic carbonyl compds. for **dyeing**
 keratin fibers)
 IT Alcohols, biological studies

Amines, biological studies
(secondary; use of heterocyclic carbonyl compds. for
dyeing keratin fibers)

IT Amino acids, biological studies

Peptides, biological studies

Phenols, biological studies

(use of heterocyclic carbonyl compds. for **dyeing
keratin fibers**)

IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 66-72-8,
Pyridoxal 67-52-7, Barbituric acid 83-30-7 83-56-7,
1,5-Dihydroxynaphthalene 84-83-3 87-02-5, 7-Amino-4-
hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1,
2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid
89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol
90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-
disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9
95-54-5, o-Phenylenediamine, biological studies 95-55-6,
2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5,
4-Chlororesorcinol 98-01-1, Furfural, biological studies
98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8,
3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0,
5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid
101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9,
3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,
biological studies 108-45-2, 1,3-Benzenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2
118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid
119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0,
4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol,
biological studies 121-47-1, 3-Aminobenzenesulfonic acid
121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9,
1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
149-91-7, Gallic acid, biological studies 150-13-0 150-19-6,
3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5,
4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 326-91-0,
2-Thenoyltrifluoroacetone 350-03-8, 3-Acetylpyridine 452-58-4,
2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
487-89-8, 1H-Indole-3-carboxaldehyde 488-87-9,
2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 500-22-1,
3-Pyridinaldehyde 504-15-4, 5-Methylresorcinol 504-17-6,
Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0,
2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3,
3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5,
3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine
578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3,
2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3
608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid
611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-
Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-

phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6,
3,4-Diaminobenzoic acid 623-09-6 623-30-3, 3-(2-Furyl)acrolein
636-25-9, 2,5-Diaminophenol 698-63-5, 5-Nitrofurfural, biological
studies 703-80-0, 3-Acetylundole 932-16-1, 1-Methyl-2-
acetylpyrrole 934-22-5, 5-Aminobenzimidazole 950-81-2
1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
4-Hydroxy-2,5,6-triaminopyrimidine 1121-60-4, 2-
Pyridinecarboxaldehyde 1122-62-9, 2-Acetylpyridine 1123-55-3,
7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1192-58-1
1197-55-3, 4-Aminophenylacetic acid 1455-77-2,
3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic
acid 1820-80-0, 3-Aminopyrazole 1874-22-2, 3-(5-Nitro-2-
furyl)acrolein 1953-54-4, 5-Hydroxyindole 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole
2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6,
2,3-Dimethylbenzothiazolium p-toluenesulfonate 2785-06-0,
2,3-Dimethylbenzothiazolium iodide 2835-95-2, 2-Methyl-5-
aminophenol 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0,
5,6-Dihydroxyindole 3158-63-2, 1,3-Dimethylthiobarbituric acid
3167-49-5, 6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole
4318-76-7, 2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole
4363-93-3, 4-Quinolinecarboxaldehyde 4506-66-5,
1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2
5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0,
5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole
5318-27-4, 6-Aminoindole 5345-47-1, 2-Aminonicotinic acid
5416-80-8 5434-20-8, 3-Aminophthalic acid 5718-83-2,
Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2,
4-Aminoquinaldine 6967-12-0, 6-Aminoindazole 7169-34-8,
Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 10111-08-7,
1H-Imidazole-2-carboxaldehyde 13669-42-6, 3-
Quinolinecarboxaldehyde 13754-19-3, 4,5-Diaminopyrimidine
14268-66-7, 3,4-Methylenedioxyaniline 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
17422-74-1 19005-93-7, 1H-Indole-2-carboxaldehyde 19012-02-3,
1-Methyl-3-acetylundole 19012-03-4 19335-11-6, 5-Aminoindazole
20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0,
2-Hydroxy-4,5,6-triaminopyrimidine 22948-94-3 23244-87-3,
2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
29788-34-9 41927-50-8 41946-53-6 49647-58-7,
2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3,
4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-
hydroxyethylamino)phenol 56216-28-5 58262-44-5 61693-42-3
62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine 66566-48-1
66635-40-3 69984-77-6, 7-Aminobenzimidazole 70643-19-5,
2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 83732-72-3

84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**
 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-
 methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
 93841-25-9 104333-09-7 110102-86-8 111423-75-7 114402-54-9
 115423-86-4 128729-30-6 130582-56-8 135043-64-0 137290-86-9
 144644-13-3 159661-42-4 202525-71-1 202525-73-3 202525-74-4
 202525-75-5 202525-76-6 202525-77-7 202525-78-8 202525-79-9
 215377-52-9 215377-53-0 215377-55-2 215377-56-3

(use of heterocyclic carbonyl compds. for **dyeing**
keratin fibers)

IT 88-15-3, 2-Acetylthiophene 98-03-3, 2-Thiophenecarboxaldehyde
 872-85-5, Pyridine-4-aldehyde 876-87-9 1072-83-9,
 2-Acetylpyrrole 5217-47-0, 1,3-Diethylthiobarbituric acid
 39511-08-5, trans-.beta.-(2-Furyl)acrolein 50994-40-6,
 p-Phenylenediamine sulfate

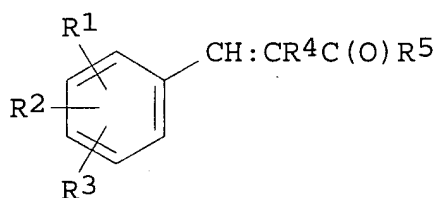
(use of heterocyclic carbonyl compds. for **dyeing**
keratin fibers use of heterocyclic carbonyl compds. for
dyeing keratin fibers)

L50 ANSWER 18 OF 22 HCA COPYRIGHT 2003 ACS on STN

129:347135 Use of benzylidene ketones for **dyeing**

keratin fibers. Moeller, Hinrich; Hoeffkes, Horst;
 Meinigke, Bernd (Henkel Kommanditgesellschaft Auf Aktien, Germany).
 Eur. Pat. Appl. EP 873743 A2 **19981028**, 15 pp. DESIGNATED
 STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW.
 APPLICATION: EP 1998-106831 19980415. PRIORITY: DE 1997-19717281
 19970424.

GI



I

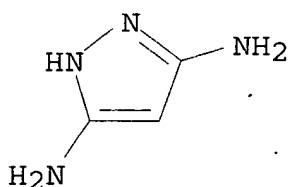
AB Benzylidene ketones [I; R1-R3 = H, halo, alkyl, hydroxyalkyl, aminoalkyl, alkoxy, (hydroxy)alkylamino, N-heterocycllyl, NO2, CO2H, SO3H; R4 = H, C1-4 alkyl, C1-4 acyl; R5 = C1-4 alkyl; or R4R5 = (substituted) C1-5 alkylene] are components of nonoxidative or oxidative **hair dyes** which provide an intensity and fastness of **color** comparable to oxidative **dyes** and cause little or no skin sensitization. I alone impart **hair colors** mainly in the yellow spectral region; I may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce orange, brown, violet, green, and black

coloration. Thus, a suspension of 3,4-methylenedioxybenzylideneacetone 10, 2,5-diaminotoluene sulfate 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H₂O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray **hair** exposed to this soln. for 30 min at 30.degree. took on a violet **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
(use of benzylidene ketones for **dyeing keratin** fibers)

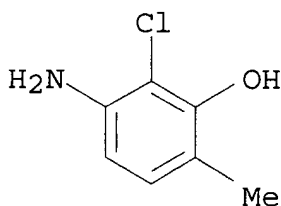
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST benzylidene ketone **hair dye**

IT Amines, biological studies
(arom.; use of benzylidene ketones for **dyeing keratin** fibers)

IT Amines, biological studies
Amines, biological studies
(aryl, secondary; use of benzylidene ketones for **dyeing keratin** fibers)

IT **Hair** preparations
(**dyes**, oxidative; use of benzylidene ketones for **dyeing keratin** fibers)

IT **Hair** preparations
(**dyes**; use of benzylidene ketones for **dyeing keratin** fibers)

IT Heterocyclic compounds
(nitrogen; use of benzylidene ketones for **dyeing keratin** fibers)

- IT Alcohols, biological studies
Amines, biological studies
(primary; use of benzylidene ketones for **dyeing**
keratin fibers)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of benzylidene ketones for **dyeing**
keratin fibers)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of benzylidene ketones for **dyeing keratin**
fibers)
- IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7,
Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene
87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1,
Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6,
5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid
90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0,
4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4,
2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine,
biological studies 95-55-6, 2-Aminophenol 95-70-5,
2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-
Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-
Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,
biological studies 108-45-2, 1,3-Benzenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 118-70-7,
4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5,
4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-
2-sulfonic acid 120-80-9, Pyrocatechol, biological studies
121-47-1, 3-Aminobenzenesulfonic acid 121-57-3,
4-Aminobenzenesulfonic acid 122-57-6, Benzylideneacetone
123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1,
4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6,
2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies
150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol
150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine
452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0
488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol
504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid
504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic

acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6, 3,4-Diaminobenzoic acid 623-09-6 636-25-9,
2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole
943-88-4, 4-Methoxybenzylideneacetone 1004-74-6,
2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
triaminopyrimidine 1080-12-2, 4-Hydroxy-3-
methoxybenzylideneacetone 1123-55-3, 7-Aminobenzothiazole
1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid
1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8,
3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole
1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic
acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole.
2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3160-35-8 3160-37-0 3167-49-5,
6-Aminonicotinic acid 3855-78-5, 2,3,4-Trimethylpyrrole
4318-76-7, 2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole
4335-90-4, 3-Benzylidene-2,4-pentanedione 4506-66-5,
1,2,4,5-Tetraaminobenzene tetrahydrochloride 4928-43-2
5007-67-0, 3,3',4,4'-Tetraaminobenzophenone 5192-03-0,
5-Aminoindole 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole
5217-47-0, 1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5432-53-1 5434-20-8,
3-Aminophthalic acid 5679-13-0, 2-Benzylidenecyclopentanone
5682-83-7, 2-Benzylidenecyclohexanone 5718-83-2,
Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic acid
6051-53-2, 2-Hydroxybenzylideneacetone 6201-65-6,
2-Chlororesorcinol 6259-50-3 6399-72-0 6628-04-2,
4-Aminoquinoline 6967-12-0, 6-Aminoindazole 7169-34-8,
Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3,
4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
2-Amino-3-hydroxypyridine 17792-58-4 19335-11-6, 5-Aminoindazole
20103-09-7, 2,5-Dichloro-p-phenylenediamine 22715-34-0,
2-Hydroxy-4,5,6-triaminopyrimidine 23244-87-3,
2,4,5-Pyridinetriamine 23894-07-7, 3,6-Dihydroxy-2,7-
naphthalenedisulfonic acid 24119-24-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41927-50-8 41946-53-6 42426-35-7 49647-58-7,
2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8 53760-27-3,
4,4'-Diaminodiphenylamine sulfate 55302-96-0, 2-Methyl-5-(2-
hydroxyethylamino)phenol 56216-28-5 58262-44-5 61078-47-5
61078-48-6 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
triaminopyrimidine 63053-27-0, 3-(4-Dimethylaminobenzylidene)-2,4-
pentanedione 65443-86-9 66566-48-1 66635-40-3 67805-13-4
69984-77-6, 7-Aminobenzimidazole 70643-19-5, 2,4-

Diaminophenoxyethanol 74918-21-1 79352-72-0 83732-72-3
 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine **84540-50-1**
 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 85926-99-4,
 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-
 methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
 93841-25-9 104333-09-7 110102-86-8 114402-54-9 115423-86-4
 128729-30-6 130582-56-8 131212-31-2 137290-86-9 144644-13-3
 159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
 202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-52-9
 215377-53-0 215377-55-2 215377-56-3 215517-65-0 215517-66-1
 215517-68-3

(use of benzylidene ketones for **dyeing keratin**
 fibers)

L50 ANSWER 19 OF 22 HCA COPYRIGHT 2003 ACS on STN

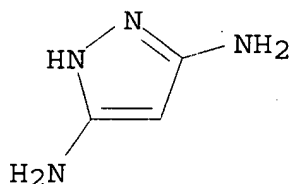
129:347134 Use of unsaturated aldehydes in **dyeing**
keratin fibers. Moeller, Hinrich; Hoeffkes, Horst (Henkel
 Kommanditgesellschaft Auf Aktien, Germany). PCT Int. Appl. WO
 9847473 A1 **19981029**, 35 pp. DESIGNATED STATES: W: AU,
 BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN; RW: AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German).
 CODEN: PIXXD2. APPLICATION: WO 1998-EP2243 19980416. PRIORITY: DE
 1997-19717224 19970424.

AB Unsatd. aldehydes, $\text{HCO}(\text{CR1:CR2})\text{nCHR3C}(\text{O})\text{R4}$.tautm.
 $\text{HCO}(\text{CR1:CR2})\text{nCR3:C}(\text{OH})\text{R4}$ (I; $\text{R1-R4} = \text{H, halo, alkyl, alkoxy, aryl,}$
 alkoxyaryl; $\text{n} = 1, 2$; if $\text{n} = 1$, R1 and R2 , R1 and R3 , R2 and R3 , or
 R2 and R4 may together form a 5-7-membered ring) and the
 corresponding acetals are components of nonoxidative or oxidative
hair dyes which provide an intensity and fastness
 of **color** comparable to oxidative **dyes** and cause
 little or no skin sensitization. I alone impart **hair**
colors mainly in the yellow and red spectral regions; I may
 be applied together with primary or secondary amines, N-heterocyclic
 compds., arom. OH compds., or compds. with active CH groups to
 produce yellow, orange, red, brown, blue, and black
colorations. Thus, 2-chloro-1-formyl-3-
 hydroxymethylenecyclohexene 10, 2-(2,5-diaminophenyl)ethanol sulfate
 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were
 suspended in 100 mL H_2O , the suspension was heated briefly to
 80.degree., cooled, and filtered, and the pH was adjusted to 6.
 Gray **hair** exposed to this soln. for 30 min at 30.degree.
 took on a violet-blue **color**.

IT **16082-33-0**, 3,5-Diaminopyrazole **84540-50-1**
 (use of unsatd. aldehydes in **dyeing keratin**
 fibers)

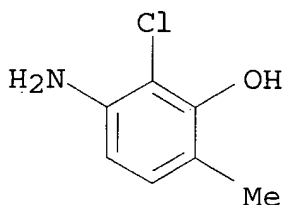
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST unsatd aldehyde **hair dye**
- IT Amines, biological studies
(arom.; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT Amines, biological studies
Amines, biological studies
(aryl, secondary; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT **Hair** preparations
(**dyes**, oxidative; use of unsatd. aldehydes in
dyeing keratin fibers)
- IT **Hair** preparations
(**dyes**; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT Heterocyclic compounds
(nitrogen; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of unsatd. aldehydes in **dyeing**
keratin fibers)
- IT Acetals
Aldehydes, biological studies
(unsatd.; use of unsatd. aldehydes in **dyeing**
keratin fibers)

- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of unsatd. aldehydes in dyeing keratin fibers)
- IT 144644-13-3
(use of benzylidene ketones for dyeing keratin fibers)
- IT 56-87-1, L-Lysine, biological studies 59-48-3, Oxindole 65-49-6,
4-Aminosalicylic acid 67-52-7, Barbituric acid 71-00-1,
L-Histidine, biological studies 83-30-7 83-56-7,
1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-
sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-
Aminobenzenesulfonic acid 89-25-8 89-57-6, 5-Aminosalicylic acid
89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol
90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-
disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 95-54-5,
o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol
95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid
99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-
Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-
Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine,
biological studies 108-45-2, 1,3-Benzenediamine, biological
studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5,
1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2
118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid
119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0,
4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol,
biological studies 121-47-1, 3-Aminobenzenesulfonic acid
121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9,
1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl
sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine
147-85-3, L-Proline, biological studies 149-91-7, Gallic acid,
biological studies 150-13-0 150-19-6, 3-Methoxyphenol
150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol
156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine
462-08-8, 3-Aminopyridine 480-66-0 488-87-9,
2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4,
5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5,
4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6,
2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol
533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid
537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline
580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2,
2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6,
2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol
610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic
acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6, 3,4-Diaminobenzoic acid 623-09-6 636-25-9,

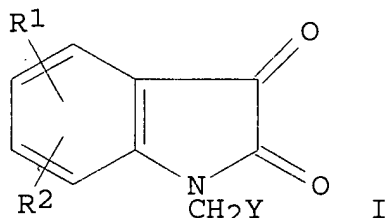
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934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-
Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine
1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline
1197-55-3, 4-Aminophenylacetic acid 1455-77-2,
3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic
acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole
2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9,
7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1,
4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium
p-toluenesulfonate 2785-06-0, 2,3-Dimethylbenzothiazolium iodide
2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 4-Aminobenzimidazole 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid
5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic
acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0
6628-04-2, 4-Aminoquinaldine 6967-12-0, 6-Aminoindazole
7169-34-8, Coumaranone 7336-20-1, Disodium 4,4'-diaminostilbene-
2,2'-disulfonate 7411-49-6 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-
phenylenediamine 7749-47-5, 2-Amino-4-methoxy-6-methylpyrimidine
7768-28-7, 2-(2-Hydroxyethyl)phenol 13754-19-3,
4,5-Diaminopyrimidine 14268-66-7, 3,4-Methylenedioxyaniline
16082-33-0, 3,5-Diaminopyrazole 16867-03-1,
2-Amino-3-hydroxypyridine 19298-14-7, N-(2-Hydroxyethyl)-p-
phenylenediamine 19335-11-6, 5-Aminoindazole 20103-09-7,
2,5-Dichloro-p-phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-
triaminopyrimidine 23244-87-3, 2,4,5-Pyridinetriamine
23894-07-7, 3,6-Dihydroxy-2,7-naphthalenedisulfonic acid
24119-24-2 24290-36-6 28020-38-4, 2,3-Diamino-6-methoxypyridine
29539-03-5, 5,6-Dihydroxyindoline 41927-50-8 41946-53-6
49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53666-79-8
53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 58262-44-5
61010-04-6, 2-Chloro-1-formyl-3-hydroxymethylenecyclohexene
61693-42-3 62496-02-0, 2-Methylamino-4,5,6-triaminopyrimidine
66566-48-1 66635-40-3 69984-77-6, 7-Aminobenzimidazole
70643-19-5, 2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0
83732-72-3 84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine
84540-50-1 85006-05-9 85679-78-3, 3,5-Diamino-2,6-
dimethoxypyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8,
3-Amino-2-methylamino-6-methoxypyridine 93841-24-8,
2-(2,5-Diaminophenyl)ethanol 93841-25-9 100524-00-3
104333-09-7 110102-86-8 114402-54-9 115423-86-4 128729-30-6
130582-56-8 135043-64-0 137290-86-9 159661-42-4 162411-49-6
202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6

202525-77-7 202525-78-8 202525-79-9 215377-52-9 215377-53-0
 215377-55-2 215377-56-3 215525-22-7

(use of unsatd. aldehydes in **dyeing keratin** fibers)

L50 ANSWER 20 OF 22 HCA COPYRIGHT 2003 ACS on STN
 129:347133 Use of 1-substituted isatins to **dye** fibers containing **keratin**. Moeller, Hinrich; Rose, David; Hoeffkes, Horst; Meinigke, Bernd (Henkel Kommanditgesellschaft Auf Aktien, Germany). PCT Int. Appl. WO 9847472 A1 19981029, 39 pp. DESIGNATED STATES: W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German). CODEN: PIXXD2. APPLICATION: WO 1998-EP2199 19980415. PRIORITY: DE 1997-19717282 19970424.

GI

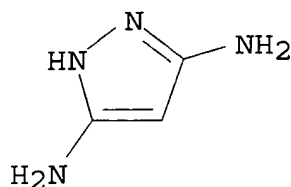


AB Isatin derivs. [I; R1, R2 = H, halo, OH, C1-4 alkyl, hydroxyalkyl, tertiary aminoalkyl, alkoxy, (substituted) amino, NO2, CO2H, SO3H; Y = OH, C1-4 alkoxy, (substituted) amino, 5-7-membered heterocyclyl] are components of nonoxidative or oxidative **hair dyes**,. I alone impart **hair colors** mainly in the yellow spectral region; I may be applied together with primary or secondary amines, N-heterocyclic compds., arom. OH compds., or compds. with active CH groups to produce intense orange, brown, violet, and black **colorations** in a variety of hues. Thus, 1-pyrrolidinomethylisatin 10, 1,8-bis(2,5-diaminophenoxy)-3,6-dioxaoctane-4HCl 10, NaOAc 10 mmol, and 1 drop 20% fatty alkyl ether sulfate were suspended in 100 mL H2O, the suspension was heated briefly to 80.degree., cooled, and filtered, and the pH was adjusted to 6. Gray **hair** exposed to this soln. for 30 min at 30.degree. took on a reddish-violet **color**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1
 (use of substituted isatins to **dye keratin** fibers)

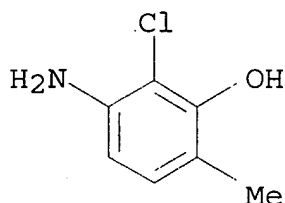
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST isatin deriv **hair dye**
- IT Amines, biological studies
(arom.; use of substituted isatins to **dye**
keratin fibers)
- IT Amines, biological studies
Amines, biological studies
(aryl, secondary; use of substituted isatins to **dye**
keratin fibers)
- IT **Hair** preparations
(**dyes**, oxidative; use of substituted isatins to
dye keratin fibers)
- IT **Hair** preparations
(**dyes**; use of substituted isatins to **dye**
keratin fibers)
- IT Heterocyclic compounds
(nitrogen; use of substituted isatins to **dye**
keratin fibers)
- IT Alcohols, biological studies
Amines, biological studies
(primary; use of substituted isatins to **dye**
keratin fibers)
- IT Alcohols, biological studies
Amines, biological studies
(secondary; use of substituted isatins to **dye**
keratin fibers)
- IT Amino acids, biological studies
Peptides, biological studies
Phenols, biological studies
(use of substituted isatins to **dye keratin**

fibers)

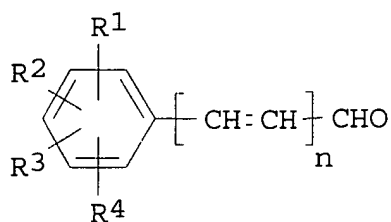
IT 59-48-3, Oxindole 65-49-6, 4-Aminosalicylic acid 67-52-7, Barbituric acid 83-30-7 83-56-7, 1,5-Dihydroxynaphthalene 87-02-5, 7-Amino-4-hydroxynaphthalene-2-sulfonic acid 87-66-1, Pyrogallol 88-21-1, 2-Aminobenzenesulfonic acid 89-57-6, 5-Aminosalicylic acid 89-86-1, 2,4-Dihydroxybenzoic acid 90-05-1, 2-Methoxyphenol 90-15-3, 1-Naphthol 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-disulfonic acid 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene 95-88-5, 4-Chlororesorcinol 98-37-3, 3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid 99-07-0, 3-Dimethylaminophenol 99-31-0, 5-Aminoisophthalic acid 99-50-3, 3,4-Dihydroxybenzoic acid 101-77-9, 4,4'-Diaminodiphenylmethane 101-80-4 102-32-9, 3,4-Dihydroxyphenylacetic acid 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol, biological studies 108-72-5, 1,3,5-Triaminobenzene 108-73-6, Phloroglucinol 116-63-2 118-70-7, 4,5,6-Triaminopyrimidine 118-92-3, 2-Aminobenzoic acid 119-59-5, 4,4'-Diaminodiphenyl sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid 120-80-9, Pyrocatechol, biological studies 121-47-1, 3-Aminobenzenesulfonic acid 121-57-3, 4-Aminobenzenesulfonic acid 123-30-8 123-31-9, 1,4-Benzenediol, biological studies 139-65-1, 4,4'-Diaminodiphenyl sulfide 141-84-4, Rhodanine 141-86-6, 2,6-Diaminopyridine 149-91-7, Gallic acid, biological studies 150-13-0 150-19-6, 3-Methoxyphenol 150-75-4, 4-Methylaminophenol 150-76-5, 4-Methoxyphenol 156-81-0, 2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 462-08-8, 3-Aminopyridine 480-66-0 488-87-9, 2,5-Dimethylresorcinol 496-73-1, 4-Methylresorcinol 504-15-4, 5-Methylresorcinol 504-17-6, Thiobarbituric acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 517-22-6, 2,4-Dimethyl-3-ethylpyrrole 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, Hydroxyhydroquinone 535-87-5, 3,5-Diaminobenzoic acid 537-65-5, 4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6, 3-Aminoquinoline 580-22-3, 2-Aminoquinoline 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 606-55-3 608-25-3, 2-Methylresorcinol 610-74-2, 2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid 611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7, 2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene 619-05-6, 3,4-Diaminobenzoic acid 623-09-6 636-25-9, 2,5-Diaminophenol 876-87-9 934-22-5, 5-Aminobenzimidazole 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6, 5-Aminoisoquinoline 1197-55-3, 4-Aminophenylacetic acid 1455-77-2, 3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic acid 1820-80-0, 3-Aminopyrazole 1953-54-4, 5-Hydroxyindole 2374-03-0, 4-Amino-3-hydroxybenzoic acid 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2654-52-6, 2,3-Dimethylbenzothiazolium

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2835-95-2, 2-Methyl-5-aminophenol 2835-99-6, 3-Methyl-4-
aminophenol 3131-52-0, 5,6-Dihydroxyindole 3158-63-2,
1,3-Dimethylthiobarbituric acid 3167-49-5, 6-Aminonicotinic acid
3855-78-5, 2,3,4-Trimethylpyrrole 4318-76-7, 2,5-Diaminopyridine
4331-29-7, 4-Aminobenzimidazole 4506-66-5, 1,2,4,5-
Tetraaminobenzene tetrahydrochloride 4928-43-2 5007-67-0,
3,3',4,4'-Tetraaminobenzophenone 5192-03-0, 5-Aminoindole
5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5217-47-0,
1,3-Diethylthiobarbituric acid 5318-27-4, 6-Aminoindole
5345-47-1, 2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid
5718-83-2, Rhodanine-3-acetic acid 5959-52-4, 3-Amino-2-naphthoic
acid 6201-65-6, 2-Chlororesorcinol 6259-50-3 6399-72-0
6532-16-7, 1-Morpholinomethylisatin 6628-04-2, 4-Aminoquinaldine
6967-12-0, 6-Aminoindazole 7169-34-8, Coumaranone 7336-20-1,
Disodium 4,4'-diaminostilbene-2,2'-disulfonate 7411-49-6
7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 7749-47-5,
2-Amino-4-methoxy-6-methylpyrimidine 7768-28-7,
2-(2-Hydroxyethyl)phenol 13129-67-4 13129-68-5 13129-69-6
13754-19-3, 4,5-Diaminopyrimidine 14268-66-7, 3,4-
Methylenedioxyaniline 15032-10-7 16082-33-0,
3,5-Diaminopyrazole 16867-03-1, 2-Amino-3-hydroxypyridine
19335-11-6, 5-Aminoindazole 20103-09-7, 2,5-Dichloro-p-
phenylenediamine 22715-34-0, 2-Hydroxy-4,5,6-triaminopyrimidine
23244-87-3, 2,4,5-Pyridinetriamine 23894-07-7,
3,6-Dihydroxy-2,7-naphthalenedisulfonic acid 24119-24-2
28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5,
5,6-Dihydroxyindoline 41927-50-8 41946-53-6 49647-58-7,
2,4,5,6-Tetraaminopyrimidine sulfate 50899-59-7,
1-Hydroxymethylisatin 53003-19-3 53003-20-6 53666-79-8
53760-27-3, 4,4'-Diaminodiphenylamine sulfate 55302-96-0,
2-Methyl-5-(2-hydroxyethylamino)phenol 56216-28-5 58262-44-5
58979-56-9 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
triaminopyrimidine 64258-84-0 66566-48-1 66635-40-3
68549-78-0 69984-77-6, 7-Aminobenzimidazole 70643-19-5,
2,4-Diaminophenoxyethanol 74918-21-1 79352-72-0 83732-72-3
84540-47-6, 2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1
84677-32-7 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
85926-99-4, 4-Hydroxyindoline 90817-34-8, 3-Amino-2-methylamino-6-
methoxypyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol
93841-25-9 104333-09-7 110102-86-8 114402-54-9 115423-86-4
128729-30-6 130582-56-8 135043-64-0 137290-86-9 144644-13-3
159661-42-4 202525-71-1 202525-73-3 202525-74-4 202525-75-5
202525-76-6 202525-77-7 202525-78-8 202525-79-9 215377-39-2
215377-40-5 215377-41-6 215377-42-7 215377-43-8 215377-44-9
215377-45-0 215377-46-1 215377-47-2 215377-48-3 215377-49-4
215377-50-7 215377-51-8 215377-52-9 215377-53-0 215377-55-2
215377-56-3

(use of substituted isatins to dye keratin
fibers)

128:158724 Oxidative **dyes** containing aldehydes for **keratin**-containing fibers. Moeller, Hinrich; Hoeffkes, Horst (Henkel K.-G.a.A., Germany). Ger. Offen. DE 19630275 A1 **19980129**, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1996-19630275 19960726.

GI

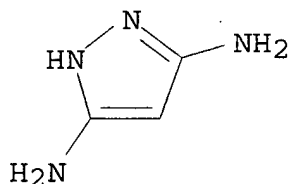


AB Direct **hair dyes** contg. an aldehyde I (R1-R4 = H, halo, C1-4 alkyl or alkoxy, C2-4 hydroxyalkyl, C1-4 aminoalkyl, NO₂, CO₂H, SO₃H, etc.; n = 0, 1) and a **dye** precursor comprising a primary or secondary arom. amine, an N-contg. heterocycle, an arom. hydroxy compd., an amino acid, and/or an oligopeptide may be used either with or without addn. of oxidizing agents such as H₂O₂. In either case, the **dyes** show excellent **color** intensity in a wide range of **color** nuances from yellowish-orange to brownish-black, excellent **color** fastness, and very low sensitizing potential. Thus, a soln. contg. equal parts of 2,3,4-trihydroxybenzaldehyde and 2-aminomethyl-4-aminophenol-Dihydrochloride produced a strong brownish-orange **color** on gray **hair**.

IT 16082-33-0, 3,5-Diaminopyrazole 84540-50-1,
2-Methyl-5-amino-6-chlorophenol
(oxidative **dyes** contg. aldehydes for **keratin**
-contg. fibers)

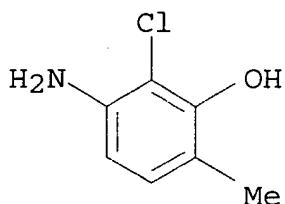
RN 16082-33-0 HCA

CN 1H-Pyrazole-3,5-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



- IC ICM A61K007-13
ICS D06P003-04; D06P003-08; D06P001-32; C07C223-06; C07C047-52;
C07C047-56; C07C047-575; C07C047-228; C07C047-27; C07C047-277
- ICA D06P003-14; D06P003-30
- CC 62-3 (Essential Oils and Cosmetics)
- ST direct **hair dye** aldehyde amine
- IT **Hair** preparations
(**dyes**, direct; oxidative **dyes** contg.
aldehydes for **keratin**-contg. fibers)
- IT **Hair** preparations
(**dyes**, oxidative; oxidative **dyes** contg.
aldehydes for **keratin**-contg. fibers)
- IT Peptides, biological studies
(oligopeptides; oxidative **dyes** contg. aldehydes for
keratin-contg. fibers)
- IT Amino acids, biological studies
Phenols, biological studies
(oxidative **dyes** contg. aldehydes for **keratin**
-contg. fibers)
- IT 60-18-4, L-Tyrosine, biological studies 65-49-6, 4-Aminosalicylic
acid 71-00-1, L-Histidine, biological studies 73-22-3,
L-Tryptophan, biological studies 87-02-5, 7-Amino-4-
hydroxynaphthalene-2-sulfonic acid 88-21-1, 2-Aminobenzenesulfonic
acid 89-57-6, 5-Aminosalicylic acid 90-02-8, Salicylaldehyde,
biological studies 90-20-0, 4-Amino-5-hydroxynaphthalene-2,7-
disulfonic acid 92-65-9 95-01-2, 2,4-Dihydroxybenzaldehyde
95-54-5, o-Phenylenediamine, biological studies 95-55-6,
2-Aminophenol 95-70-5, 2,5-Diaminotoluene 98-37-3,
3-Amino-4-hydroxybenzenesulfonic acid 99-05-8, 3-Aminobenzoic acid
99-31-0, 5-Aminoisophthalic acid 99-98-9, 4-Dimethylaminoaniline
100-10-7, 4-Dimethylaminobenzaldehyde 101-77-9 101-80-4
108-45-2, m-Phenylenediamine, biological studies 108-72-5,
1,3,5-Triaminobenzene 109-97-7, Pyrrole 116-63-2,
4-Amino-3-hydroxynaphthalene-1-sulfonic acid 118-70-7,
4,5,6-Triaminopyrimidine 118-92-3 119-59-5, 4,4'-Diaminodiphenyl
sulfoxide 119-70-0, 4,4'-Diaminodiphenylamine-2-sulfonic acid
121-33-5, Vanillin 121-47-1, 3-Aminobenzenesulfonic acid
121-57-3, 4-Aminobenzenesulfonic acid 139-65-1,
4,4'-Diaminodiphenyl sulfide 141-86-6, 2,6-Diaminopyridine
147-85-3, L-Proline, biological studies 150-13-0, 4-Aminobenzoic
acid 150-75-4, 4-Methylaminophenol 156-81-0,
2,4-Diaminopyrimidine 452-58-4, 2,3-Diaminopyridine 458-36-6,

Coniferyl aldehyde 462-08-8, 3-Aminopyridine 504-29-0,
2-Aminopyridine 535-87-5, 3,5-Diaminobenzoic acid 537-65-5,
4,4'-Diaminodiphenylamine 578-66-5, 8-Aminoquinoline 580-17-6,
3-Aminoquinoline 580-22-3, 2-Aminoquinoline 591-27-5,
3-Aminophenol 603-81-6, 2,3-Diaminobenzoic acid 610-74-2,
2,5-Diaminobenzoic acid 611-03-0, 2,4-Diaminobenzoic acid
611-98-3, 4,4'-Diaminobenzophenone 615-50-9 615-66-7,
2-Chloro-p-phenylenediamine 615-71-4, 1,2,4-Triaminobenzene
619-05-6, 3,4-Diaminobenzoic acid 623-09-6 636-25-9,
2,5-Diaminophenol 934-22-5, 5-Aminobenzimidazole 1004-74-6,
2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-
triaminopyrimidine 1123-55-3, 7-Aminobenzothiazole 1125-60-6,
5-Aminoisoquinoline 1194-98-5, 2,5-Dihydroxybenzaldehyde
1197-55-3, 4-Aminophenylacetic acid 1455-77-2,
3,5-Diamino-1,2,4-triazole 1571-72-8, 3-Amino-4-hydroxybenzoic
acid 1820-80-0, 3-Aminopyrazole 2144-08-3 2374-03-0,
4-Amino-3-hydroxybenzoic acid 2835-95-2, 2-Methyl-5-aminophenol
2835-99-6, 3-Methyl-4-aminophenol 2836-04-6, 3-
Dimethylaminoaniline 3131-52-0, 5,6-Dihydroxyindole 3167-49-5,
6-Aminonicotinic acid 4318-76-7, 2,5-Diaminopyridine 4331-29-7,
1H-Benzimidazol-4-amine 4506-66-5, 1,2,4,5-Tetraaminobenzene
tetrahydrochloride 4928-43-2 5007-67-0, 3,3',4,4'-
Tetraaminobenzophenone 5192-03-0, 5-Aminoindole 5192-04-1,
7-Aminoindole 5192-23-4, 4-Aminoindole 5307-02-8,
2,5-Diaminoanisole 5318-27-4, 6-Aminoindole 5345-47-1,
2-Aminonicotinic acid 5434-20-8, 3-Aminophthalic acid 5959-52-4,
3-Amino-2-naphthoic acid 6203-18-5, 4-Dimethylaminocinnamaldehyde
6399-72-0 6628-04-2, 4-Aminoquinoline 6967-12-0,
6-Aminoindazole 7336-20-1, Disodium 4,4'-diaminostilbene-2,2'-
disulfonate 7411-49-6 7749-47-5, 2-Amino-4-methoxy-6-
methylpyrimidine 13754-19-3, 4,5-Diaminopyrimidine 14268-66-7,
3,4-Methylenedioxyaniline 16082-33-0, 3,5-Diaminopyrazole
16867-03-1, 2-Amino-3-hydroxypyridine 17754-90-4,
4-Diethylamino-2-hydroxybenzaldehyde 19335-11-6, 5-Aminoindazole
20103-09-7, 2,5-Dichloro-p-phenylenediamine 23244-87-3,
2,4,5-Pyridinetriamine 24119-24-2 28020-38-4,
2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline
41946-53-6 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate
53666-79-8 53760-27-3, 4,4'-Diaminodiphenylamine sulfate
54381-16-7 55302-96-0, 2-Methyl-5-(2-hydroxyethylamino)phenol
56216-28-5 61693-42-3 62496-02-0, 2-Methylamino-4,5,6-
triaminopyrimidine 66566-48-1 66635-40-3 69984-77-6,
7-Aminobenzimidazole 74918-21-1 79352-72-0 81892-72-0,
1,3-Bis(2,4-diaminophenoxy)propane 83732-72-3 84540-47-6,
2,6-Dihydroxy-3,4-dimethylpyridine 84540-50-1,
2-Methyl-5-amino-6-chlorophenol 85679-78-3, 2,6-Dimethoxy-3,5-
diaminopyridine 85926-99-4, 4-Hydroxyindoline 90817-34-8
93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 110102-86-8
114402-54-9 115423-86-4 126335-41-9 128729-30-6 130582-56-8
135043-64-0 137290-86-9 144644-13-3 159661-42-4 159661-45-7
202525-71-1 202525-73-3 202525-74-4 202525-75-5 202525-76-6
202525-77-7 202525-78-8 202525-79-9

(oxidative **dyes** contg. aldehydes for **keratin**
-contg. fibers)

L50 ANSWER 22 OF 22 HCA COPYRIGHT 2003 ACS on STN

127:113123 Oxidative **hair dye** compositions

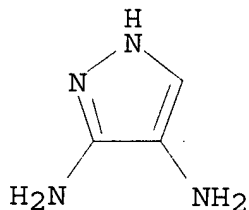
containing chloro-1-N-(2-hydroxyethyl)-p-phenylenediamine and couplers. Loewe, Isolde; Balzer, Wolfgang R. (Wella Ag, Germany). Ger. Offen. DE 19545854 A1 **19970612**, 7 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1995-19545854 19951208.

AB **Hair dye** compns. consist of a combination of chloro-1-N-(2-hydroxyethyl)-p-phenylenediaminees and couplers such as aminophenols. Thus, 3-chloro-1-N-(2-hydroxyethyl)amino-4-aminobenzene sulfate salt (I) was prepd. by acetylation of 4-nitro-2-chloroaniline, followed by redn. of the nitro group and subsequent reaction with chloroethyl chloroformate. A **hair dye** compn. consisted of I 4.20, 2-amino-4-(2-hydroxyethyl)aminoanisoole sulfate 1.50, m-aminophenol 0.80, 5-amino-2-methylphenol 0.10, cetyl alc. 15.00, 28% soln. of sodium lauryl alc. diglycol ether sulfate 3.50, 25% aq. soln. of ammonia 3.00, sodium sulfite 0.30, and water 71.60 g. The above compn. imparted a brown **color** to **hair**.

IT **16461-98-6**, 1H-Pyrazole-3,4-diamine **84540-50-1**, 3-Amino-2-chloro-6-methylphenol
(oxidative **hair dye** compns. contg.
chloro(hydroxyethyl)phenylenediamine and couplers)

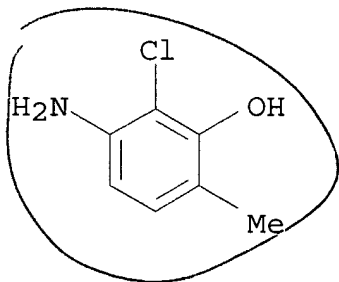
RN 16461-98-6 HCA

CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN 84540-50-1 HCA

CN Phenol, 3-amino-2-chloro-6-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

ICS D06P001-32; D06P003-08

ICA C09B051-00; C09B029-16; C09B001-22; C09B011-08

- CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 25
- ST phenylenediamine chloro hydroxyethyl **hair dye**
oxidative; **dye** oxidative **hair**
chlorohydroxyethylphenylenediamine coupler prepn
- IT **Hair preparations**
(**dyes**, oxidative; oxidative **hair dye**
compns. contg. chloro(hydroxyethyl)phenylenediamine and couplers)
- IT 50-81-7, Ascorbic acid, biological studies 68-11-1, Thioglycolic acid, biological studies 90-15-3, 1-Naphthol 95-88-5, 4-ChloroResorcinol 96-91-3, 2-Amino-4,6-dinitrophenol 99-57-0, 2-Amino-4-nitrophenol 108-45-2, 1,3-Benzenediamine, biological studies 108-46-3, Resorcinol, biological studies 121-88-0, 2-Amino-5-nitrophenol 123-30-8, p-Aminophenol 128-95-0, 1,4-Diaminoanthraquinone 137-19-9, 4,6-DiChloroResorcinol 533-31-3, 4-Hydroxy-1,2-methylenedioxybenzene 591-27-5 608-25-3, 2-MethylResorcinol 1004-74-6, Tetraaminopyrimidine 2380-94-1, 4-Hydroxyindole 2475-45-8, 1,4,5,8-Tetraaminoanthraquinone 2835-95-2, 5-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol 3248-91-7 5307-14-2, 2-Nitro-1,4-diaminobenzene 5858-51-5, C.I.14805 7757-83-7 16461-98-6, 1H-Pyrazole-3,4-diamine 17672-22-9, 6-Amino-2-methylphenol 24905-87-1, 2-Amino-5-(2-hydroxyethyl)aminonitrobenzene 27080-42-8, 1-(2-Ureidoethyl)amino-4-nitrobenzene 53222-92-7, 3-Amino-2-methylphenol 56331-35-2 70643-19-5, 2,4-DiAminophenoxyethanol 81329-90-0, 4-(2-Hydroxyethyl)amino-1,2-methylenedioxybenzene 83763-47-7, 2-Amino-4-(2-hydroxyethyl)aminoanisole 84540-50-1, 3-Amino-2-chloro-6-methylphenol 85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine 86817-42-7, 4-Amino-2-hydroxyphenoxyethanol 93841-24-8 100418-33-5, 4-(2-Hydroxyethyl)amino-3-nitrotoluene 110102-86-8, 3-Amino-4-chloro-6-methylphenol 122455-85-0, 3-Amino-4-fluoro-6-methylphenol 137290-78-9, 3-Amino-4-methoxy-6-methylphenol 141614-04-2, 2,4-DiAmino-5-ethoxytoluene 141922-20-5, 2,4-Diamino-5-fluorotoluene 192323-95-8, 3-Chloro-1-N-(2-hydroxyethyl)amino-4-aminobenzene
(oxidative **hair dye** compns. contg.
chloro(hydroxyethyl)phenylenediamine and couplers)
- IT 192323-96-9P
(oxidative **hair dye** compns. contg.
chloro(hydroxyethyl)phenylenediamine and couplers)
- IT 121-87-9, 4-Nitro-2-chloroaniline 627-11-2, Chloroethyl chloroformate
(oxidative **hair dye** compns. contg.
chloro(hydroxyethyl)phenylenediamine and couplers)
- IT 881-87-8P, 4-Acetyl amino-3-chloronitrobenzene 57556-49-7P, 4-Acetyl amino-3-chloroaniline 192323-94-7P
(oxidative **hair dye** compns. contg.
chloro(hydroxyethyl)phenylenediamine and couplers)

=> d l51 1-18 cbib abs hitstr hitind

L51 ANSWER 1 OF 18 HCA COPYRIGHT 2003 ACS on STN

135:126915 Oxidative **hair dye** precursor compositions containing diaminopyrazole, aminomethylphenol and phenylenediamine compounds and method of **dyeing hair**. Braun, Hans-juergen (Switz.). U.S. Pat. Appl. Publ. US 20010009044 A1 20010726, 6 pp., Cont.-in-part of U.S. Ser. No. 91,203. (English). CODEN: USXXCO. APPLICATION: US 2001-788945 20010220. PRIORITY: DE 1996-19643059 19961018; US 1998-91203 19980610.

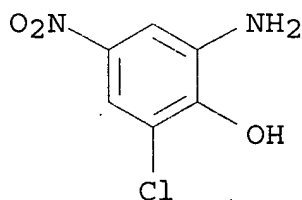
AB The oxidn. **dye** precursor-contg. compn. for oxidative **dyeing of hair**, includes (a) 0.1-10% by wt. of a combination of at least one 4,5-diaminopyrazole compd. selected from the group consisting of 4,5-diamino-1-methyl-1H-pyrazole, 4,5-diamino-1-ethyl-1H-pyrazole, 4,5-diamino-1-isopropyl-1H-pyrazole, 4,5-diamino-1-(2'-hydroxyethyl)-1H-pyrazole, 4,5-diamino-1-benzyl-1H-pyrazole and 4,5-diamino-1-(4'-methylbenzyl)-1H-pyrazole; (b) at least one 5-amino-2-methylphenol compd. selected from the group consisting of 5-amino-2-methylphenol, 5-[(2'-hydroxyethyl)amino]-2-methylphenol and 5-methyl-amino-2-methyl-phenol; and (c) at least one m-phenylenediamine compd. selected from the group consisting of m-phenylenediamine, 2,4-diamino-1-(2'-hydroxyethoxy)benzene, 2,4-diamino-1-(2',3'-dihydroxypropoxy)benzene, 1,3-bis-(2',4'-diaminophenoxy)propane, 2-amino-4-[(2'-hydroxyethyl)amino]anisole and 1,5-bis-(2'-hydroxyethoxy)-2,4-diaminobenzene. The compn. is advantageously mixed with an oxidant, e.g., H2O2 to form a ready-to-apply mixt. for **dyeing hair**.

IT 6358-09-4, 2-Amino-6-chloro-4-nitrophenol 45514-38-3
131311-66-5 131657-78-8, 2-Chloro-6-ethylamino-4-nitrophenol 155601-15-3 155601-16-4
155601-17-5 155601-30-2 157469-54-0
173994-78-0 351184-15-1

(oxidative **hair dye** precursor compns. contg. diaminopyrazole, aminomethylphenol and phenylenediamine compds.)

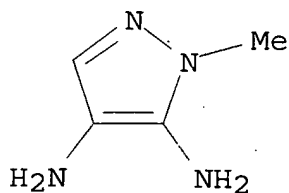
RN 6358-09-4 HCA

CN Phenol, 2-amino-6-chloro-4-(nitro-) (6CI, 8CI, 9CI) (CA INDEX NAME)

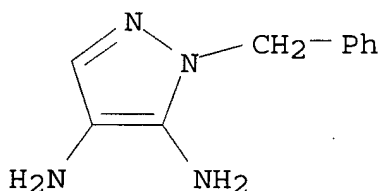


RN 45514-38-3 HCA

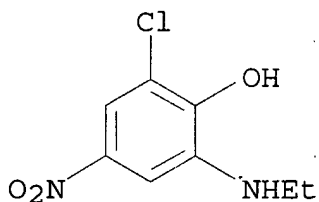
CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



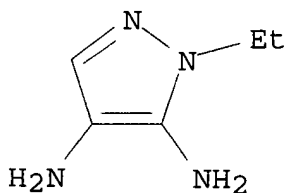
RN 131311-66-5 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-(phenylmethyl)- (9CI) (CA INDEX NAME)



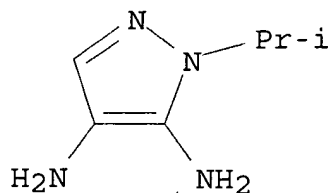
RN 131657-78-8 HCA
 CN Phenol, 2-chloro-6-(ethylamino)-4-nitro- (9CI) (CA INDEX NAME)



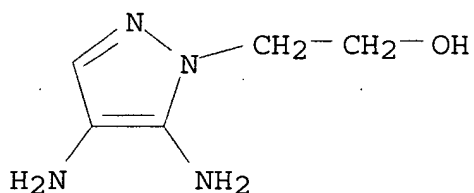
RN 155601-15-3 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-ethyl- (9CI) (CA INDEX NAME)



RN 155601-16-4 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-(1-methylethyl)- (9CI) (CA INDEX NAME)



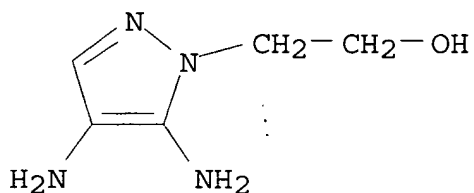
RN 155601-17-5 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)



RN 155601-30-2 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino-, sulfate (1:1) (salt) (9CI) (CA INDEX NAME)

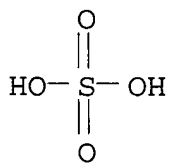
CM 1

CRN 155601-17-5
 CMF C5 H10 N4 O



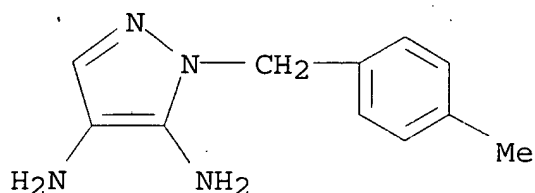
CM 2

CRN 7664-93-9
 CMF H2 O4 S



RN 157469-54-0 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-[(4-methylphenyl)methyl]- (9CI) (CA

INDEX NAME)



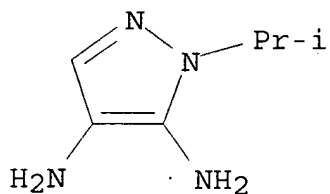
RN 173994-78-0 HCA

CN 1H-Pyrazole-4,5-diamine, 1-(1-methylethyl)-, sulfate (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 155601-16-4

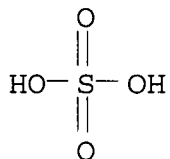
CMF C6 H12 N4



CM 2

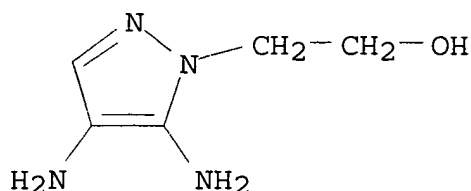
CRN 7664-93-9

CMF H2 O4 S



RN 351184-15-1 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino-, dihydrochloride (9CI) (CA
INDEX NAME)



● 2 HCl

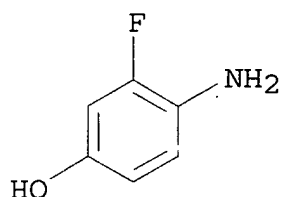
- IC ICM A61K007-13
 NCL 008405000
 CC 62-3 (Essential Oils and Cosmetics)
 ST aminomethylphenol diaminopyrazole phenylenediamine oxidative
hair dye
 IT **Hair preparations**
 (dyes, oxidative; oxidative **hair dye**
 precursor compns. contg. diaminopyrazole, aminomethylphenol and
 phenylenediamine compds.)
 IT 90-15-3, 1-Naphthol 91-20-3D, Naphthalene, compds., biological
 studies 106-50-3, p-Phenylenediamine, biological studies
 108-45-2, m-Phenylenediamine, biological studies 108-46-3,
 Resorcinol, biological studies 274-09-9D, 1,3-Benzodioxole,
 compds. 591-27-5, m-Aminophenol 615-50-9 2835-95-2,
 5-Amino-2-methylphenol **6358-09-4**, 2-Amino-6-chloro-4-
 nitrophenol 7722-84-1, Hydrogen peroxide, biological studies
45514-38-3 55302-96-0 55302-99-3 70643-19-5
 74918-21-1 75513-65-4 81892-72-0 83763-47-7,
 2-Amino-4-[(2'-hydroxyethyl)amino]anisole 83763-48-8 93841-25-9
 94082-77-6 94082-85-6 **131311-66-5** **131657-78-8**,
 2-Chloro-6-ethylamino-4-nitrophenol **155601-15-3**
155601-16-4 **155601-17-5** **155601-30-2**
157469-54-0 **173994-78-0** **351184-15-1**
 (oxidative **hair dye** precursor compns. contg.
 diaminopyrazole, aminomethylphenol and phenylenediamine compds.)
 L51 ANSWER 2 OF 18 HCA COPYRIGHT 2003 ACS on STN
 132:212503 Oxidative **hair dyes** containing cationic
 orthophenylenediamines. Genet, Alain; Lagrange, Alain (L'oreal,
 Fr.). Eur. Pat. Appl. EP 984007 A1 20000308, 20 pp. DESIGNATED
 STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN: EPXXDW.
 APPLICATION: EP 1999-401937 19990728. PRIORITY: FR 1998-10978
 19980902.
 AB The title compns. are disclosed. Thus, 3-[3-(2-
 aminophenylamino)propyl]-1-methyl-3H-imidazol-1-ium.HCl (I) was
 prepd. by quaternization and redn. of (2-imidazol-1-yl-propyl)-2(2-
 nitrophenyl)amine. A **hair dye** contained I

0.909, 4,5-diamino-1-ethyl-3-methylpyrazole.2HCl 0.639, and excipients and water q.s. 100 g. Equal amts. of the compn. is mixed with equal amts. of 20 vol. hydrogen peroxide and applied on the **hair**. The **hair** is rinsed after 30 min, washed with **shampoo**, rinsed and dried to obtain a green **color**.

IT 399-95-1, 4-Amino-3-fluorophenol 399-96-2,
4-Amino-2-fluorophenol 221110-59-4
(oxidative **hair dyes** contg. cationic
orthophenylenediamines)

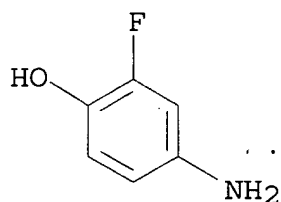
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



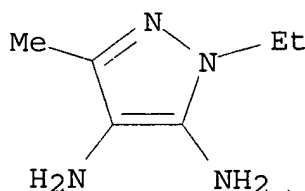
RN 399-96-2 HCA

CN Phenol, 4-amino-2-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 221110-59-4 HCA

CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl-, dihydrochloride (9CI)
(CA INDEX NAME)



● 2 HCl

IC ICM C07D233-54

ICS C07D213-20; A61K007-13

- CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 28
- ST oxidative **hair dye** cationic phenylenediamine
- IT **Dyes**
(cationic; oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT **Hair preparations**
(**dyes**, oxidative; oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT Salts, biological studies
(of peroxy acids; oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT Enzymes, biological studies
Peroxysulfates
(oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT Group IIIA element compounds
(perborates; oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT 89-25-8 90-15-3, .alpha.-Naphthol 92-65-9 93-05-0 95-55-6,
2-Aminophenol 95-70-5 95-88-5 99-98-9 101-54-2 106-50-3,
1,4-Benzenediamine, biological studies 108-26-9 108-45-2,
1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol,
biological studies 123-30-8 124-43-6 148-71-0 **399-95-1**
, 4-Amino-3-fluorophenol **399-96-2**, 4-Amino-2-fluorophenol
533-31-3, Sesamol 537-65-5 591-27-5, 3-Aminophenol 608-25-3
615-45-2 615-66-7 1630-11-1 2359-52-6 2359-53-7 2380-86-1,
6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-95-2,
2-Methyl-5-Aminophenol 2835-96-3, 4-Amino-2-methylphenol
2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methyl
phenol 4664-16-8, 2,6-Dihydroxy-4-methylpyridine 4770-37-0,
6-Hydroxyindoline 5306-96-7 5862-80-6 6393-01-7 7218-02-2
7556-37-8 7575-35-1 7722-84-1, Hydrogen peroxide, biological
studies 9003-99-0, Peroxidase 10035-10-6D, Hydrobromic acid,
alkali metal salts, biological studies 14791-78-7 17672-22-9,
2-Amino-6-methylphenol 29785-47-5, 4-Amino-2-methoxymethylphenol
55302-96-0 63969-43-7 66422-95-5, 2,4-Diaminophenoxyethanol
dihydrochloride 66566-48-1 70643-19-5 73793-80-3 79352-72-0,
4-Amino-2-aminomethylphenol 80467-77-2 81892-72-0 83763-47-7
93841-24-8 97902-52-8 104333-09-7 105293-89-8 105607-68-9
110952-46-0 126335-43-1 128729-30-6 128729-31-7 129697-50-3,
5-Acetamido-2-aminophenol 130582-53-5 135855-34-4 135855-35-5
168202-61-7 207568-58-9 **221110-59-4** 260362-68-3
260362-69-4 260362-70-7 260362-71-8 260362-72-9 260362-73-0
260362-74-1 260362-75-2 260362-76-3 260362-77-4 260362-78-5
260362-80-9
(oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT 9055-15-6P, Oxidoreductase
(oxidative **hair dyes** contg. cationic orthophenylenediamines)
- IT 77-78-1, Dimethylsulfate 1493-27-2, 1-Fluoro-2-nitro-benzene

5036-48-6, 3-Imidazol-1-yl-propylamine
(oxidative **hair dyes** contg. cationic
orthophenylenediamines)

IT 260362-79-6P
(oxidative **hair dyes** contg. cationic
orthophenylenediamines)

L51 ANSWER 3 OF 18 HCA COPYRIGHT 2003 ACS on STN

132:212502 Oxidative **hair dyes** containing cationic
orthophenylenediamine derivatives. Genet, Alain; Lagrange, Alain
(L'oreal, Fr.). Eur. Pat. Appl. EP 984006 A1 20000308, 27 pp.
DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN:
EPXXDW. APPLICATION: EP 1999-401936 19990728. PRIORITY: FR
1998-10977 19980902.

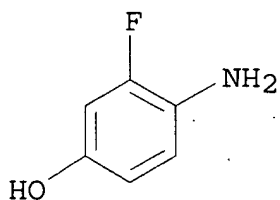
AB Prepn. and use of the title compns. are disclosed. Thus,
1,3-bis-1{3-{3-[(2-amino-aniline)-N-propyl]}-3H-imidazol-1-
ium}propane.dibromide.dibromhydrate (I) was prepd. by quaternization
of (3-imidazol-1-ylpropyl)-(2-nitrophenyl)amine (prepn. given) and
redn. by H/Pd. A **hair dye** contained I 2.388,
3,-7-diaminopyrazolopyrimidine.2HCl 0.666, and excipients and water
q.s. 100 g. Equal amts. of the compn. is mixed with equal amts. of
20 vol. hydrogen peroxide and applied on the **hair**. The
hair is rinsed after 30 min, washed with **shampoo**,
rinsed and dried to obtain a chestnut brown **color**.

IT 399-95-1, 4-Amino-3-fluorophenol 399-96-2
221110-59-4

(oxidative **hair dyes** contg. cationic
orthophenylenediamine derivs.)

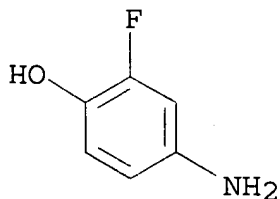
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

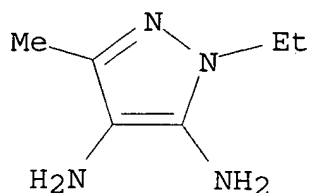


RN 399-96-2 HCA

CN Phenol, 4-amino-2-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 221110-59-4 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl-, dihydrochloride (9CI)
 (CA INDEX NAME)



● 2 HCl

IC ICM C07D233-54
 ICS C07C211-63; A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 28
 ST oxidative **hair dye** cationic phenylenediamine
 deriv
 IT **Dyes**
 (cationic; oxidative **hair dyes** contg.
 cationic orthophenylenediamine derivs.)
 IT **Hair** preparations
 (**dyes**, oxidative; oxidative **hair dyes**
 contg. cationic orthophenylenediamine derivs.)
 IT Oxidizing agents
 (oxidative **hair dyes** contg. cationic
 orthophenylenediamine derivs.)
 IT Enzymes, biological studies
 Peroxysulfates
 (oxidative **hair dyes** contg. cationic
 orthophenylenediamine derivs.)
 IT Group IIIA element compounds
 (perborates; oxidative **hair dyes** contg.
 cationic orthophenylenediamine derivs.)
 IT 89-25-8, 3-Methyl 1-phenylpyrazol-5-one 90-15-3, .alpha.-Naphthol
 92-65-9 93-05-0 95-55-6, 2-Aminophenol 95-70-5 95-88-5
 99-98-9 101-54-2 106-50-3, 1,4-Benzenediamine, biological
 studies 108-26-9 108-45-2, 1,3-Benzenediamine, biological
 studies 108-46-3, 1,3-Benzenediol, biological studies 123-30-8
 124-43-6 148-71-0 399-95-1, 4-Amino-3-fluorophenol
 399-96-2 533-31-3, Sesamol 537-65-5 591-27-5
 608-25-3 615-45-2 615-66-7 1630-11-1 2359-52-6 2359-53-7
 2380-86-1, 6-Hydroxy indole 2380-94-1, 4-Hydroxy indole
 2835-95-2, 2-Methyl-5-Aminophenol 2835-96-3, 4-Amino-2-methylphenol
 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-
 methylphenol 4664-16-8 4770-37-0, 6-Hydroxyindoline 5306-96-7
 5862-80-6 6393-01-7 7218-02-2 7556-37-8 7575-35-1

7722-84-1, Hydrogen peroxide, biological studies 9003-99-0,
Peroxidase 9055-15-6, Oxidoreductase 10035-10-6D, Hydrobromic
acid, alkali metal salts, biological studies 14791-78-7
17672-22-9, 2-Amino-6-methylphenol 29785-47-5,
4-Amino-2-methoxymethylphenol 55302-96-0 63969-43-7 66566-48-1
70643-19-5 73793-80-3 79352-72-0, 4-Amino-2-aminomethylphenol
80467-77-2 81892-72-0 83763-47-7 93841-24-8 97902-52-8
104333-09-7 105293-89-8 105607-68-9 110952-46-0 126335-43-1
128729-30-6 128729-31-7 129697-50-3, 5-Acetamido-2-aminophenol
130582-53-5 135855-34-4 135855-35-5 168202-61-7 207568-58-9
221110-58-3 **221110-59-4** 260366-94-7 260366-95-8
260366-96-9 260366-97-0

(oxidative **hair dyes** contg. cationic
orthophenylenediamine derivs.)

IT 260366-98-1P

(oxidative **hair dyes** contg. cationic
orthophenylenediamine derivs.)

IT 109-64-8, 1,3-Dibromopropane 1493-27-2, 1-Fluoro-2-nitrobenzene
5036-48-6, 1H-Imidazole-1-propanamine

(oxidative **hair dyes** contg. cationic
orthophenylenediamine derivs.)

IT 78156-03-3P 260362-79-6P 260366-99-2P

(oxidative **hair dyes** contg. cationic
orthophenylenediamine derivs.)

L51 ANSWER 4 OF 18 HCA COPYRIGHT 2003 ACS on STN

132:212501 Oxidative **hair dyes** containing cationic
ortho-phenylenediamines. Genet, Alain; Lagrange, Alain (L'oreal,
Fr.). Eur. Pat. Appl. EP 983996 A1 20000308, 18 pp. DESIGNATED
STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN: EPXXDW.
APPLICATION: EP 1999-401920 19990727. PRIORITY: FR 1998-10979
19980902.

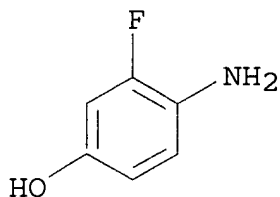
AB The title compns. are disclosed. Thus, {2-[2-amino-phenylamino]-
ethyl}-trimethyl-ammonium chloride.HCl.H2O (I) was prep'd. by
quaternization of N,N-dimethyl-N'-(2-nitrophenyl)-ethane-1,2-
diamine, redn. with hydrogen over palladium, and reaction with
hydrochloric acid. A **hair dye** contained I
0.852, meta-aminophenol 0.327 excipients and water q.s. 100 g.
Equal amts. of the compn. is mixed with equal amts. of 20 vol.
hydrogen peroxide and applied on the **hair**. The
hair is rinsed after 30 min, washed with **shampoo**,
rinsed and dried to obtain a green color.

IT 399-95-1, 4-Amino-3-fluorophenol 399-96-2,
4-Amino-2-fluorophenol 221110-59-4

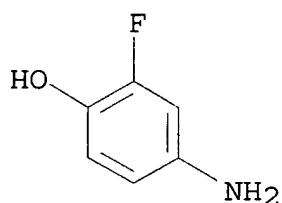
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)

RN 399-95-1 HCA

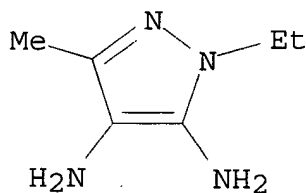
CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 399-96-2 HCA
 CN Phenol, 4-amino-2-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 221110-59-4 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl-, dihydrochloride (9CI)
 (CA INDEX NAME)



● 2 HCl

IC ICM C07C211-63
 ICS A61K007-13; B65D081-32
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 25
 ST oxidative **hair dye** cationic phenylenediamine
 IT **Dyes**
 (cationic; oxidative **hair dyes** contg.
 cationic ortho-phenylenediamines)
 IT **Hair preparations**
 (**dyes**, oxidative; oxidative **hair dyes**
 contg. cationic ortho-phenylenediamines)
 IT Salts, biological studies
 (of peroxy acids; oxidative **hair dyes** contg.
 cationic ortho-phenylenediamines)

- IT Coupling agents
Oxidizing agents
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)
- IT Enzymes, biological studies
Peroxysulfates
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)
- IT Group IIIA element compounds
(perborates; oxidative **hair dyes** contg.
cationic ortho-phenylenediamines)
- IT Amines, biological studies
(phenylalkyl; oxidative **hair dyes** contg.
cationic ortho-phenylenediamines)
- IT 89-25-8 90-15-3, .alpha.-Naphthol 92-65-9 93-05-0 95-55-6,
2-Aminophenol 95-70-5 95-88-5 99-98-9 101-54-2 106-50-3,
1,4-Benzenediamine, biological studies 108-26-9 108-45-2,
1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol,
biological studies 124-43-6 148-71-0 **399-95-1**,
4-Amino-3-fluorophenol **399-96-2**, 4-Amino-2-fluorophenol
533-31-3, Sesamol 537-65-5 591-27-5, 3-Aminophenol 608-25-3
615-45-2 615-66-7 1630-11-1 2359-52-6 2359-53-7 2380-86-1,
6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-95-2, 2-Methyl
5-Aminophenol 2835-96-3, 4-Amino-2-methylphenol 2835-98-5,
2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol
4664-16-8 4770-37-0, 6-Hydroxyindoline 5306-96-7 5862-80-6
6393-01-7 7218-02-2 7556-37-8 7575-35-1 7722-84-1, Hydrogen
peroxide, biological studies 9003-99-0, Peroxidase 9055-15-6,
Oxidoreductase 10035-10-6D, Hydrobromic acid, alkali metal salts,
biological studies 14791-78-7 17672-22-9, 2-Amino-6-methylphenol
19298-14-7 29785-47-5, 4-Amino-2-methoxymethylphenol 55302-96-0
63969-43-7 66422-95-5, 2,4-Diaminophenoxyethanol dihydrochloride
66566-48-1 70643-19-5 73793-80-3 79352-72-0,
4-Amino-2-aminomethylphenol 80467-77-2 81892-72-0 83763-47-7
97902-52-8 104333-09-7 105293-89-8 105607-68-9 110952-46-0
126335-43-1 128729-30-6 128729-31-7 129697-50-3,
5-Acetamido-2-Aminophenol 130582-53-5 135855-34-4 135855-35-5
168202-61-7 201599-07-7 207568-58-9 221110-58-3
221110-59-4 260364-68-9 260364-69-0 260364-70-3
260364-71-4 260364-72-5 260364-73-6 260364-74-7 260364-75-8
260364-76-9 260364-77-0 260364-78-1 260364-79-2 260364-80-5
260364-81-6 260364-82-7 260364-83-8
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)
- IT 260364-85-0P
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)
- IT 77-78-1, Dimethyl sulfate 7647-01-0, Hydrochloric acid, reactions
25238-55-5
(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)
- IT 260364-87-2P

(oxidative **hair dyes** contg. cationic
ortho-phenylenediamines)

L51 ANSWER 5 OF 18 HCA COPYRIGHT 2003 ACS on STN

132:127456 Oxidative **hair dye** compositions

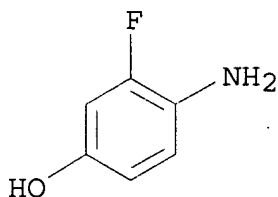
containing 3-amino pyrazoline derivatives as coupling agents.
Breton, Philippe; Lagrange, Alain; Maubru, Mireille (L'oreal, Fr.).
Eur. Pat. Appl. EP 974337 A1 20000126, 17 pp. DESIGNATED STATES: R:
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE,
SI, LT, LV, FI, RO. (French). CODEN: EPXXDW. APPLICATION: EP
1999-401643 19990701. PRIORITY: FR 1998-9224 19980720.

AB Oxidative **hair dye** compns. contg. 3-amino
pyrazoline derivs. as coupling agents are claimed. A **hair
dye** compn. contained 3-amino-1-(4'-
fluorophenyl)pyrazoline.HCl 0.647, 4,5-diamino-1,3-
dimethylpyrazole.2HCl 0.597, excipients and water q.s. 100 g. At
the time of use equal amt. of the compn. and 20 vol. hydrogen
peroxide are mixed and applied on the **hair** for 30 min,
then the **hair** is rinsed, washed with **shampoo** and
dried to obtain a light grays blue **color**.

IT 399-95-1, 4-Amino-3-fluorophenol 399-96-2,
4-Amino-2-fluorophenol 64068-32-2
(oxidative **hair dye** compns. contg. amino
pyrazoline derivs. as coupling agents)

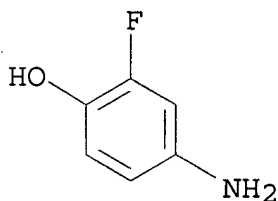
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



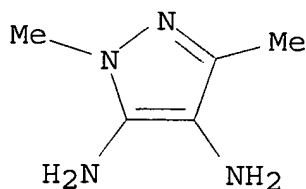
RN 399-96-2 HCA

CN Phenol, 4-amino-2-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 64068-32-2 HCA

CN 1H-Pyrazole-4,5-diamine, 1,3-dimethyl-, dihydrochloride (9CI) (CA
INDEX NAME)



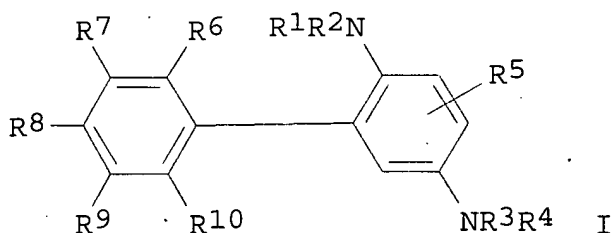
● 2 HCl

IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** aminopyrazoline deriv coupler
 IT **Hair** preparations
 (**dyes**, oxidative; oxidative **hair dye**
 compns. contg. amino pyrazoline derivs. as coupling agents)
 IT Salts, biological studies
 (of peroxy acids; oxidative **hair dye** compns.
 contg. amino pyrazoline derivs. as coupling agents)
 IT Solvents
 (org.; oxidative **hair dye** compns. contg.
 amino pyrazoline derivs. as coupling agents)
 IT Coupling agents
 Oxidizing agents
 (oxidative **hair dye** compns. contg. amino
 pyrazoline derivs. as coupling agents)
 IT Bromates
 Enzymes, biological studies
 (oxidative **hair dye** compns. contg. amino
 pyrazoline derivs. as coupling agents)
 IT 92-65-9 93-05-0 95-55-6, 2-Aminophenol 95-70-5 99-98-9
 101-54-2 106-50-3, 1,4-Benzenediamine, biological studies
 123-30-8 124-43-6 148-71-0 399-95-1,
 4-Amino-3-fluorophenol 399-96-2, 4-Amino-2-fluorophenol
 537-65-5 615-66-7 1630-11-1 2359-52-6 2359-53-7 2835-96-3
 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-
 methylphenol 3314-35-0, 3-Amino-1-phenyl pyrazoline 5306-96-7
 5862-80-6 6393-01-7 6463-30-5 6463-31-6 6463-32-7
 6463-33-8 6463-34-9 6463-36-1 6463-37-2 6463-38-3
 6463-40-7 6463-41-8 6463-42-9 6463-43-0 6463-44-1
 6463-45-2 6463-46-3 6463-47-4 6508-11-8 7218-02-2
 7575-35-1 7722-84-1, Hydrogen peroxide, biological studies
 14791-78-7 17672-22-9, 2-Amino-6-methylphenol 28020-48-6
 29574-28-5 29785-47-5 50526-72-2 63969-43-7 **64068-32-2**
 66000-42-8 66566-48-1 71088-30-7 73031-55-7 73031-60-4
 73793-80-3 77992-20-2 77992-23-5 77992-24-6 77992-26-8
 77992-27-9 77992-28-0 79352-72-0 80467-77-2 83959-18-6
 83959-19-7 83959-21-1 83959-26-6 84534-02-1 84534-04-3

85964-06-3 85964-07-4 85964-08-5 85964-09-6 85964-10-9
 85964-11-0 85964-12-1 85964-17-6 91337-93-8 93841-24-8
 97902-52-8 104333-09-7 105293-89-8 105607-68-9 110952-46-0
 115798-82-8 126335-43-1 128729-30-6 128729-31-7 129626-47-7
 129626-51-3 129697-50-3, 5-Acetamido-2-aminophenol 130582-53-5
 135855-34-4 135855-35-5 168202-61-7 201599-07-7 207568-58-9
 221110-58-3 256236-63-2 256236-64-3 256236-65-4 256236-66-5
 (oxidative **hair dye** compns. contg. amino
 pyrazoline derivs. as coupling agents)

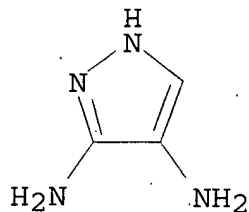
L51 ANSWER 6 OF 18 HCA COPYRIGHT 2003 ACS on STN
 132:6216 Oxidative **hair coloring** agents containing
 2,5-diamino-1-phenylbenzene derivatives. Braun, Hans-Juergen;
 Chassot, Laurent (Wella A.-G., Germany). PCT Int. Appl. WO 9959527
 A2 19991125, 71 pp. DESIGNATED STATES: W: BR, JP, US; RW: AT, BE,
 CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE.
 (German). CODEN: PIXXD2. APPLICATION: WO 1999-EP1084 19990219.
 PRIORITY: DE 1998-19822041 19980516.

GI

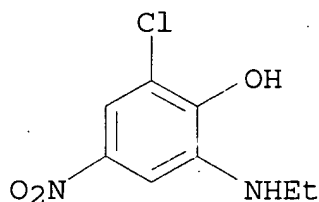


AB Oxidative **dyes** for **keratin** fibers based on a
 combination of developers and couplers, including .gtoreq.1
 2,5-diamino-1-phenylbenzene deriv. [I; R1-R4 = H, alkyl,
 (di)hydroxyalkyl, alkoxyalkyl; or R1NR2 and/or R3NR4 = 4-8-membered
 aliph. ring; .gtoreq.2 of R1-R4 = H; R5 = H, OH, halo,
 (hydroxy)alkyl, alkoxy; R6-R10 = H, halo, CN, OH, alkyl, alkoxy,
 alkylthio, SH, NO2, (substituted) amino, CF3, CHO, etc.; or 2
 neighboring groups of R6-R10 = OCH2O] or salt thereof as a
 developer, provide intense shades of **color** which are
 extremely fast to light, washing, and friction and are stable during
 storage. Thus, bromo-p-phenylenediamine-HCl was converted with
 di-tert-Bu dicarbonate to 2,5-bis(tert-butoxycarbonylamino)bromobenz
 ene, and then with benzeneboric acid in the presence of
 tetrakis(triphenylphosphine)palladium to I-2HCl (R1-R10 = H) (II).
 A **hair dye** compn. contg. II 0.320,
 5-amino-2-methylphenol 0.300, 4-amino-3-methylphenol 0.600,
 4-aminophenol 0.600, .alpha.-naphthol 0.100, 2-chloro-6-(ethylamino)-
 4-nitrophenol 0.200, 8% aq. K oleate 10.000, 22% aq. NH3 10.000,
 iso-PrOH 10.000, ascorbic acid 0.300, and H2O to 100.000 g, when
 mixed 1:1 with 6% H2O2 and applied to bleached **hair**,
 produced a red **color**.

IT 16461-98-6D, 1H-Pyrazole-3,4-diamine, derivs.
 131657-78-8, 2-Chloro-6-(ethylamino)-4-nitrophenol
 155601-30-2, 4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole
 sulfate
 (oxidative **hair coloring** agents contg.
 diaminophenylbenzene derivs.)
 RN 16461-98-6 HCA
 CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN 131657-78-8 HCA
 CN Phenol, 2-chloro-6-(ethylamino)-4-nitro- (9CI) (CA INDEX NAME)

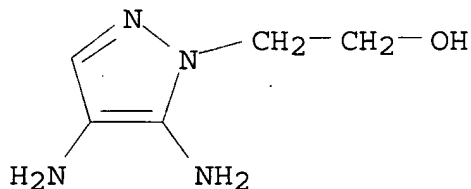


RN 155601-30-2 HCA
 CN 1H-Pyrazole-1-ethanol, 4,5-diamino-, sulfate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 155601-17-5

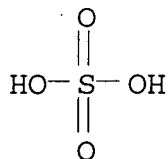
CMF C5 H10 N4 O



CM 2

CRN 7664-93-9

CMF H2 O4 S



IC ICM A61K007-00
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** aminophenylbenzene
 IT **Hair** preparations
 (dyes, oxidative; oxidative **hair**
 coloring agents contg. diaminophenylbenzene derivs.)
 IT 251114-11-1P
 (7oxidative **hair coloring** agents contg.
 diaminophenylbenzene derivs.)
 IT 90-15-3, .alpha.-Naphthol 95-70-5, 2,5-Diaminotoluene 96-91-3,
 2-Amino-4,6-dinitrophenol 106-50-3, 1,4-Benzenediamine, biological
 studies 108-46-3, 1,3-Benzenediol, biological studies 123-30-8,
 4-Aminophenol 591-27-5, 3-Aminophenol 608-25-3,
 1,3-Dihydroxy-2-methylbenzene 1004-74-6D, Tetraaminopyrimidine,
 derivs. 2835-95-2, 5-Amino-2-methylphenol 2835-97-4,
 2-Amino-3-methylphenol 2835-98-5, 2-Amino-5-methylphenol
 2835-99-6, 4-Amino-3-methylphenol **16461-98-6D**,
 1H-Pyrazole-3,4-diamine, derivs. 54381-16-7 59320-13-7
 70643-19-5 78886-51-8 83763-48-8 93841-24-8 93841-25-9
131657-78-8, 2-Chloro-6-(ethylamino)-4-nitrophenol
 135043-64-0, 4-Amino-2-(aminomethyl)phenol dihydrochloride
155601-30-2, 4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole
 sulfate
 (oxidative **hair coloring** agents contg.
 diaminophenylbenzene derivs.)
 IT 109942-17-8P, [1,1'-Biphenyl]-2,5-diamine 112196-97-1P
 251114-04-2P 251114-05-3P 251114-06-4P 251114-07-5P,
 [1,1'-Biphenyl]-2,3',5-triamine 251114-08-6P 251114-09-7P
 251114-10-0P 251114-12-2P 251114-14-4P 251114-15-5P
 251114-16-6P 251114-17-7P 251114-18-8P 251114-19-9P
 251114-20-2P 251114-21-3P 251114-22-4P 251114-23-5P
 251114-24-6P 251114-25-7P 251114-26-8P 251114-27-9P
 251114-28-0P 251114-29-1P 251114-30-4P 251114-31-5P
 251114-32-6P 251114-33-7P 251114-34-8P 251114-35-9P
 251114-36-0P 251114-37-1P 251114-38-2P 251114-39-3P
 251114-40-6P 251114-41-7P 251114-42-8P 251114-43-9P
 251114-44-0P 251114-45-1P 251114-46-2P 251114-47-3P
 251114-48-4P 251114-49-5P 251114-50-8P 251114-51-9P
 251114-52-0P 251114-53-1P 251114-54-2P 251114-55-3P
 251114-56-4P 251114-57-5P 251114-58-6P 251114-59-7P
 251114-60-0P 251114-61-1P 251114-62-2P 251114-63-3P
 251114-64-4P 251114-65-5P 251114-66-6P 251114-67-7P
 251114-68-8P 251114-69-9P 251114-70-2P 251114-71-3P
 251114-72-4P 251114-73-5P 251114-74-6P 251114-75-7P

| | | | |
|--------------|--------------|--------------|--------------|
| 251114-76-8P | 251114-77-9P | 251114-78-0P | 251114-79-1P |
| 251114-80-4P | 251114-81-5P | 251114-82-6P | 251114-83-7P |
| 251114-84-8P | 251114-85-9P | 251114-86-0P | 251114-87-1P |
| 251114-88-2P | 251114-89-3P | 251114-90-6P | 251114-91-7P |
| 251114-92-8P | 251114-93-9P | 251114-94-0P | 251114-95-1P |
| 251114-96-2P | 251114-97-3P | 251114-98-4P | 251114-99-5P |
| 251115-00-1P | 251115-01-2P | 251115-02-3P | 251115-03-4P |
| 251115-04-5P | 251115-05-6P | 251115-06-7P | 251115-07-8P |
| 251115-08-9P | 251115-09-0P | 251115-10-3P | 251115-11-4P |
| 251115-12-5P | | | |

(oxidative hair coloring agents contg.
diaminophenylbenzene derivs.)

IT 95-46-5, 1-Bromo-2-methylbenzene 98-80-6, Benzeneboronic acid
99-90-1, 1-Bromo-4-acetylbenzene 101-55-3, 1-Bromo-4-
phenoxybenzene 104-92-7, 4-Bromoanisole 104-95-0 106-38-7,
1-Bromo-4-methylbenzene 106-39-8, 1-Bromo-4-chlorobenzene
106-40-1, 4-Bromoaniline 106-41-2, 4-Bromophenol 108-37-2,
1-Bromo-3-chlorobenzene 109-85-3, 2-Methoxyethylamine 111-42-2,
Diethanolamine, reactions 121-43-7, Trimethyl borate 123-75-1,
Pyrrolidine, reactions 124-40-3, Dimethylamine, reactions
141-43-5, reactions 327-75-3, 1-Bromo-2,4-
bis(trifluoromethyl)benzene 344-38-7 350-30-1,
3-Chloro-4-fluoronitrobenzene 392-83-6, 1-Bromo-2-
trifluoromethylbenzene 401-78-5, 1-Bromo-3-trifluoromethylbenzene
402-43-7, 1-Bromo-4-trifluoromethylbenzene 445-01-2 452-74-4
460-00-4, 1-Bromo-4-fluorobenzene 553-94-6, 1-Bromo-2,5-
dimethylbenzene 556-96-7, 1-Bromo-3,5-dimethylbenzene 576-23-8,
1-Bromo-2,3-dimethylbenzene 577-19-5, 1-Bromo-2-nitrobenzene
578-57-4, 1-Bromo-2-methoxybenzene 583-70-0, 1-Bromo-2,4-
dimethylbenzene 583-71-1, 1-Bromo-3,4-dimethylbenzene 586-61-8,
1-Bromo-4-isopropylbenzene 586-78-7, 1-Bromo-4-nitrobenzene
588-93-2, 1-Bromo-4-propylbenzene 588-96-5, 1-Bromo-4-
ethoxybenzene 591-17-3, 1-Bromo-3-methylbenzene 591-20-8
616-30-8, 2,3-Dihydroxypropylamine 623-00-7, 1-Bromo-4-
cyanobenzene 694-80-4, 1-Bromo-2-chlorobenzene 698-67-9,
4-Bromobenzamide 1007-15-4 1072-85-1, 1-Bromo-2-fluorobenzene
1073-06-9, 1-Bromo-3-fluorobenzene 1074-16-4 1081-73-8
1193-72-2, 1-Bromo-2,4-dichlorobenzene 1422-53-3 1450-75-5
1585-07-5, 1-Bromo-4-ethylbenzene 1973-22-4, 1-Bromo-2-
ethylbenzene 2113-57-7, 3-Bromobiphenyl 2142-63-4 2357-52-0,
1-Bromo-3-fluoro-4-methoxybenzene 2655-84-7, 1-Bromo-3-
ethoxybenzene 2859-78-1, 1-Bromo-3,4-dimethoxybenzene 3460-23-9
3972-65-4, 1-Bromo-4-tert-butylbenzene 4654-39-1 5326-34-1
5344-78-5 5391-88-8 5469-19-2, 1-Bromo-2,4,5-trimethylbenzene
5720-07-0, 4-Methoxybenzeneboronic acid 5798-75-4, Ethyl
4-bromobenzoate 6259-08-1 6698-13-1, 1-Bromo-2,3-
methylenedioxybenzene 6952-59-6, 1-Bromo-3-cyanobenzene
7149-70-4 7295-44-5 7745-93-9, 1-Bromo-2-methyl-5-nitrobenzene
10269-01-9 10342-83-3 10365-98-7, 3-Methoxybenzeneboronic acid
13331-27-6, 3-Nitrobenzeneboronic acid 13852-51-2,
5-Chloro-2-methyl-4-nitroaniline 14472-14-1 16588-26-4
17715-69-4, 1-Bromo-2,4-dimethoxybenzene 19472-74-3 19614-16-5

19752-55-7, 1-Bromo-3,5-dichlorobenzene 22190-38-1 24398-88-7,
 Ethyl 3-bromobenzoate 24424-99-5, Di-tert-butyl dicarbonate
 25245-34-5, 1-Bromo-2,5-dimethoxybenzene 27060-75-9 29558-77-8,
 4-Bromo-4'-hydroxybiphenyl 29682-39-1, 1-Bromo-2-chloro-4-
 nitrobenzene 30418-59-8, 3-Aminobenzeneboronic acid 34598-49-7,
 5-Bromoindan-1-one 41492-05-1, 1-Bromo-4-butylbenzene
 51554-95-1, 1-Bromo-4-pentylbenzene 55289-35-5 56961-77-4,
 1-Bromo-2,3-dichlorobenzene 60956-26-5 98816-61-6 101079-49-6
 117572-79-9 150351-43-2 167415-27-2 244104-66-3 251115-21-6

(oxidative **hair coloring** agents contg.
 diaminophenylbenzene derivs.)

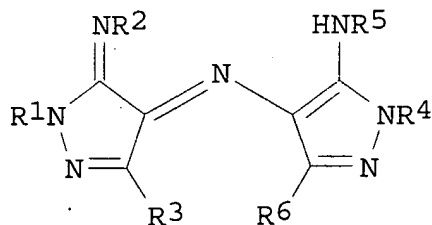
IT 29608-77-3P 103977-87-3P 244104-65-2P 251115-13-6P
 251115-14-7P 251115-15-8P 251115-16-9P 251115-17-0P
 251115-18-1P 251115-19-2P 251115-20-5P

(oxidative **hair coloring** agents contg.
 diaminophenylbenzene derivs.)

L51 ANSWER 7 OF 18 HCA COPYRIGHT 2003 ACS on STN

130:53651 Bispyrazoles, their preparation and their use in **hair dyes**. Doehling, Annelie; Geibel, Wolfram; Goettel, Otto (Wella A.-G., Germany). Ger. DE 19730412 C1 **19981203**, 14 pp. (German). CODEN: GWXXAW. APPLICATION: DE 1997-19730412 19970716.

GI



I

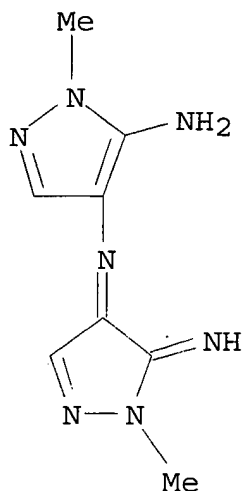
AB The bispyrazoles (I; R1, R2, R3, R4, R5, R6 = H, C1-6-alkyl or -hydroxyalkyl, C2-6-alkoxyalkyl or -aminoalkyl, optionally substituted aryl or heteroaryl; R1R2, R4R5 may form a C3 bridging group) or their salts are obtained by oxidative coupling of the requisite 4-aminopyrazoles. The direct **dyes** I may be incorporated into coupler/developer **hair dye** compns. to provide red **tints**. In an example, 4-[(5-amino-1-methyl-1H-pyrazol-4-yl)imino]-4,5-dihydro-5-imino-1-methyl-1H-pyrazole was obtained by dimerization of 4,5-diamino-1-methyl-1H-pyrazole dihydrochloride in the presence of H2O2 and was then incorporated into an acid oxidative **hair dye** compn. to provide a bright copper shade.

IT 217311-33-6P, 4-[(5-Amino-1-methyl-1H-pyrazol-4-yl)imino]-
 4,5-dihydro-5-imino-1-methyl-1H-pyrazole 217311-35-8P
 217311-37-0P 217311-38-1P 217311-39-2P
 217311-40-5P

(dye; prepn. of bispyrazole direct dyes for incorporation into reddish hair tints)

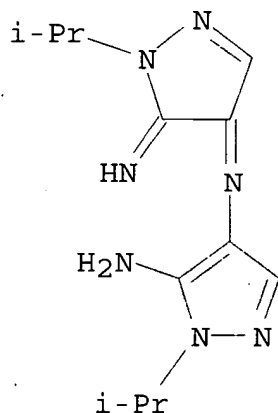
RN 217311-33-6 HCA

CN 1H-Pyrazole-4,5-diamine, N4-(1,5-dihydro-5-imino-1-methyl-4H-pyrazol-4-ylidene)-1-methyl- (9CI) (CA INDEX NAME)



RN 217311-35-8 HCA

CN 1H-Pyrazole-4,5-diamine, N4-[1,5-dihydro-5-imino-1-(1-methylethyl)-4H-pyrazol-4-ylidene]-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



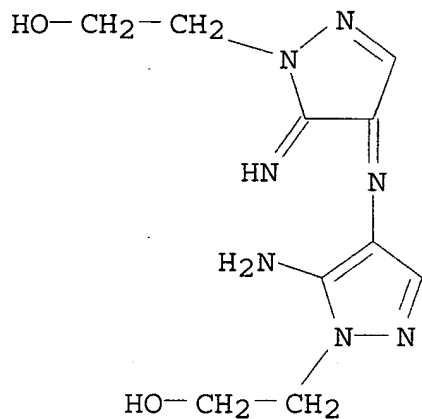
RN 217311-37-0 HCA

CN 1H-Pyrazole-1-ethanol, 4-[[5-amino-1-(2-hydroxyethyl)-1H-pyrazol-4-yl]imino]-4,5-dihydro-5-imino-, sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 217311-36-9

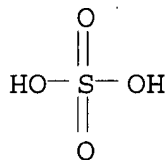
CMF C10 H15 N7 O2



CM 2

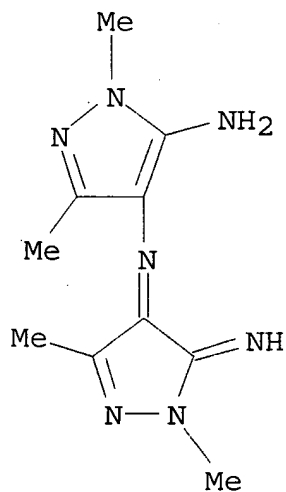
CRN 7664-93-9

CMF H2 O4 S



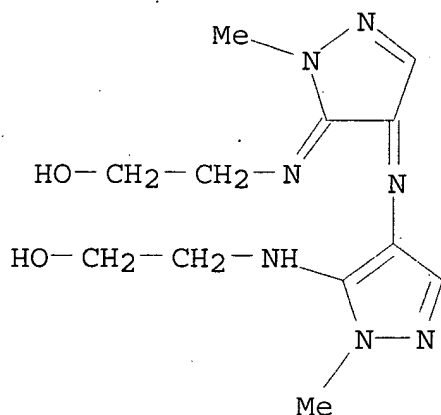
RN 217311-38-1 HCA

CN 1H-Pyrazole-4,5-diamine, N4-(1,5-dihydro-5-imino-1,3-dimethyl-4H-pyrazol-4-ylidene)-1,3-dimethyl- (9CI) (CA INDEX NAME)



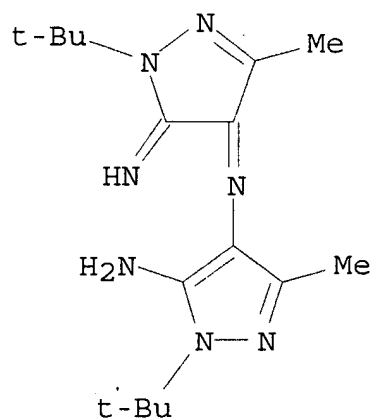
RN 217311-39-2 HCA

CN Ethanol, 2-[[2,4-dihydro-4-[[5-[(2-hydroxyethyl)amino]-1-methyl-1H-pyrazol-4-yl]imino]-2-methyl-3H-pyrazol-3-ylidene]amino]- (9CI) (CA INDEX NAME)



RN 217311-40-5 HCA

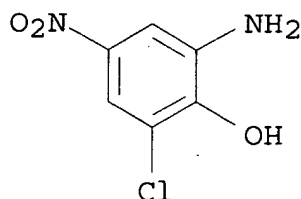
CN 1H-Pyrazole-4,5-diamine, 1-(1,1-dimethylethyl)-N4-[1-(1,1-dimethylethyl)-1,5-dihydro-5-imino-3-methyl-4H-pyrazol-4-ylidene]-3-methyl- (9CI) (CA INDEX NAME)



IT 62625-14-3, 2-Amino-6-chloro-4-nitrophenol hydrochloride
(in **hair dye** compns. incorporating
bispyrazoles for reddish **tints**)

RN 62625-14-3 HCA

CN Phenol, 2-amino-6-chloro-4-nitro-, monohydrochloride (9CI) (CA INDEX NAME)

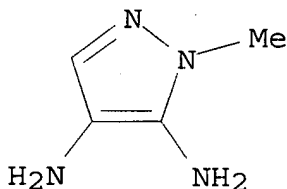


● HCl

IT 21616-59-1, 4,5-Diamino-1-methyl-1H-pyrazole dihydrochloride
 64068-32-2, 4,5-Diamino-1,3-dimethyl-1H-pyrazole
 dihydrochloride 64068-33-3, 4,5-Diamino-3-methyl-1-phenyl-
 1H-pyrazole dihydrochloride 155601-30-2,
 4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole sulfate
 173994-78-0, 4,5-Diamino-1-isopropyl-1H-pyrazole sulfate
 217311-41-6, 4-Amino-5-(2-hydroxyethylamino)-1H-pyrazole
 dihydrochloride
 (starting material; prepn. of bispyrazole direct **dyes**
 for incorporation into reddish **hair tints**)

RN 21616-59-1 HCA

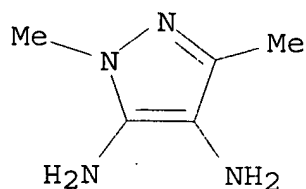
CN 1H-Pyrazole-4,5-diamine, 1-methyl-, dihydrochloride (9CI) (CA INDEX
 NAME)



● 2 HCl

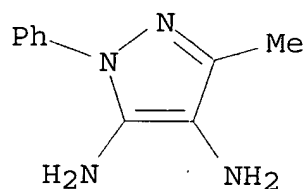
RN 64068-32-2 HCA

CN 1H-Pyrazole-4,5-diamine, 1,3-dimethyl-, dihydrochloride (9CI) (CA
 INDEX NAME)



● 2 HCl

RN 64068-33-3 HCA

CN 1H-Pyrazole-4,5-diamine, 3-methyl-1-phenyl-, dihydrochloride (9CI)
(CA INDEX NAME)

● 2 HCl

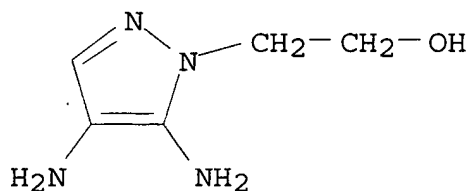
RN 155601-30-2 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino-, sulfate (1:1) (salt) (9CI) (CA
INDEX NAME)

CM 1

CRN 155601-17-5

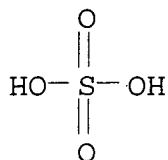
CMF C5 H10 N4 O



CM 2

CRN 7664-93-9

CMF H2 O4 S



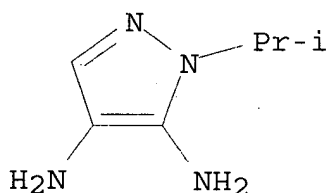
RN 173994-78-0 HCA

CN 1H-Pyrazole-4,5-diamine, 1-(1-methylethyl)-, sulfate (1:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 155601-16-4

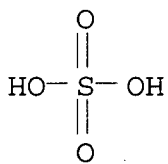
CMF C6 H12 N4



CM 2

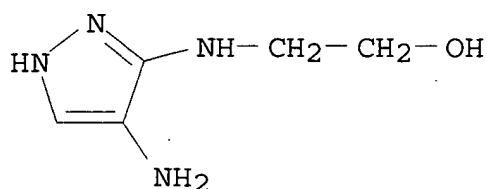
CRN 7664-93-9

CMF H2 O4 S



RN 217311-41-6 HCA

CN Ethanol, 2-[(4-amino-1H-pyrazol-3-yl)amino]-, dihydrochloride (9CI)
(CA INDEX NAME)



● 2. HCl

- IC ICM C09B023-16
ICS A61K007-13; C07D231-38; D06P003-04; D06P003-08
ICA D06P003-14
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 62
ST bispyrazole prepn **hair dye**
IT **Dyes**
(direct; prepn. of bispyrazole direct **dyes** for incorporation into reddish **hair tints**)
IT **Hair preparations**
(**dyes**, oxidative; prepn. of bispyrazole direct **dyes** for incorporation into reddish **hair tints**)
IT **Hair preparations**
(**dyes**; prepn. of bispyrazole direct **dyes** for incorporation into reddish **hair tints**)
IT Anthraquinone **dyes**
Azo **dyes**
(for incorporation into reddish **hair tints**)
IT 2390-60-5, C.I. Basic Blue 7
(blue **dye**; in **hair dye** compns. incorporating bispyrazoles for reddish **tints**)
IT 95-88-5, 4-Chlororesorcinol 108-46-3, 1,3-Benzenediol, uses 591-27-5, 3-Aminophenol 608-25-3 2835-95-2, 5-Amino-2-methylphenol 26455-21-0, N-[3-(Dimethylamino)phenyl]urea 66422-95-5, 2,4-Diamino-1-(2-hydroxyethoxy)benzene dihydrochloride 83763-48-8 94082-77-6, 2,4-Diamino-1,5-bis(2-hydroxyethoxy)benzene 217311-42-7 217311-43-8
(coupler; **hair dye** compns. incorporating bispyrazoles for reddish **tints**)
IT 615-50-9 2835-99-6, 4-Amino-3-methylphenol 7575-35-1, 4-[Bis(2-hydroxyethyl)amino]aniline 49647-58-7 93841-25-9 135043-64-0, 4-Amino-2-(aminomethyl)phenol dihydrochloride
(developer; **hair dye** compns. incorporating bispyrazoles for reddish **tints**)
IT 93633-79-5 104333-00-8, N-(2,3-Dihydroxypropyl)-2-nitro-4-(trifluoromethyl)aniline

- (**dye**; in **hair dye** compns.
incorporating bispyrazoles for reddish **tints**)
- IT 217311-33-6P, 4-[(5-Amino-1-methyl-1H-pyrazol-4-yl)imino]-
4,5-dihydro-5-imino-1-methyl-1H-pyrazole 217311-35-8P
217311-37-0P 217311-38-1P 217311-39-2P
217311-40-5P
(**dye**; prepn. of bispyrazole direct **dyes** for
incorporation into reddish **hair tints**)
- IT 62625-14-3, 2-Amino-6-chloro-4-nitrophenol hydrochloride
95576-89-9, 1-Amino-5-chloro-4-(2,3-dihydroxypropylamino)-2-
nitrobenzene 100418-33-5, 4-(2-Hydroxyethylamino)-3-nitrotoluene
132885-85-9
(in **hair dye** compns. incorporating
bispyrazoles for reddish **tints**)
- IT 7722-84-1, Hydrogen peroxide (H₂O₂), uses
(oxidative coupling and **dyeing** reagent; prepn. of
bispyrazole direct **dyes** for incorporation into reddish
hair tints)
- IT 21616-59-1, 4,5-Diamino-1-methyl-1H-pyrazole dihydrochloride
64068-32-2, 4,5-Diamino-1,3-dimethyl-1H-pyrazole
dihydrochloride 64068-33-3, 4,5-Diamino-3-methyl-1-phenyl-
1H-pyrazole dihydrochloride 155601-30-2,
4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole sulfate
173994-78-0, 4,5-Diamino-1-isopropyl-1H-pyrazole sulfate
217311-41-6, 4-Amino-5-(2-hydroxyethylamino)-1H-pyrazole
dihydrochloride
(starting material; prepn. of bispyrazole direct **dyes**
for incorporation into reddish **hair tints**)

L51 ANSWER 8 OF 18 HCA COPYRIGHT 2003 ACS on STN

130:29064. Composition for **dyeing keratin** fibers

comprising a pyrazolin-4,5-dione and an aromatic primary amine.

Vidal, Laurent; Malle, Gerard; Maubru, Mireille (L'Oreal, Fr.). PCT
Int. Appl. WO 9851268 A1 19981119, 43 pp. DESIGNATED

STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,
CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP,
KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US,
UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF,
BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU,
MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2.
APPLICATION: WO 1998-FR619 19980326. PRIORITY: FR 1997-5843
19970513.

- AB A compn. for **dyeing keratin** fibers, in
particular human **keratin** fibers such as **hair**
comprising at least one pyrazolin-4,5-dione (Markush structure
given) and at least one arom. primary amine. Said compn. enables
the **dyeing** of **keratin** fibers without an
oxidizing agent in shades which are strong, varied, resistant and
less selective than those of prior art. The invention also concerns
dyeing methods and devices using said compn. A **hair**
dye compn. contained 3-methyl-1-phenylpyrazolin-4,5-dione

0.940, paraphenylenedimaine 0.540, Et alc. 40.0, citric acid q.s. pH = 2, and water q.s. 100.0 g.

IT 399-95-1 16461-98-6, 1H-Pyrazole-3,4-diamine

45514-38-3 76368-87-1 96886-30-5

155601-16-4 184172-86-9 184172-97-2

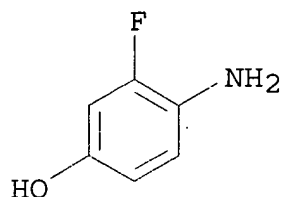
184172-99-4 184173-43-1 199340-99-3

216320-84-2

(compn. for **dyeing keratin** fibers comprising
pyrazolindione and arom. primary amine)

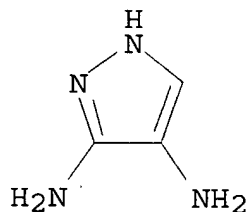
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



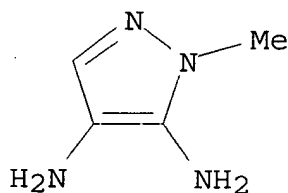
RN 16461-98-6 HCA

CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



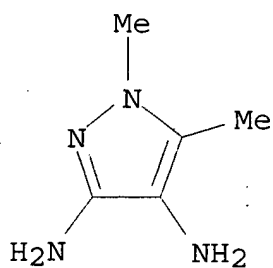
RN 45514-38-3 HCA

CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



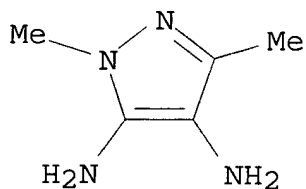
RN 76368-87-1 HCA

CN 1H-Pyrazole-3,4-diamine, 1,5-dimethyl- (9CI) (CA INDEX NAME)



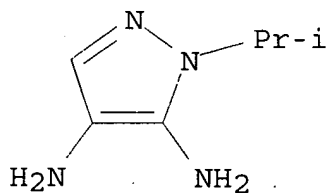
RN 96886-30-5 HCA

CN 1H-Pyrazole-4,5-diamine, 1,3-dimethyl- (9CI) (CA INDEX NAME)



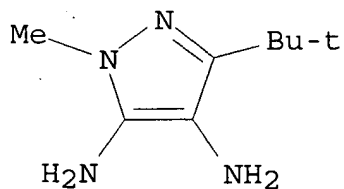
RN 155601-16-4 HCA

CN 1H-Pyrazole-4,5-diamine, 1-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 184172-86-9 HCA

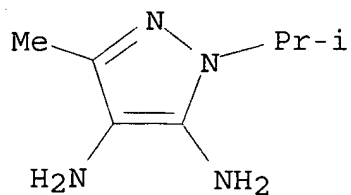
CN 1H-Pyrazole-4,5-diamine, 3-(1,1-dimethylethyl)-1-methyl-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

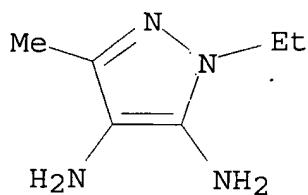
RN 184172-97-2 HCA

CN 1H-Pyrazole-4,5-diamine, 3-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)



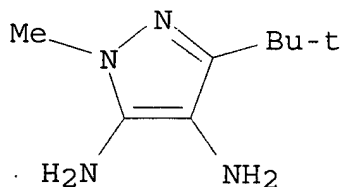
RN 184172-99-4 HCA

CN 1H-Pyrazole-4,5-diamine, 1-ethyl-3-methyl- (9CI) (CA INDEX NAME)



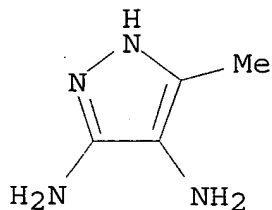
RN 184173-43-1 HCA

CN 1H-Pyrazole-4,5-diamine, 3-(1,1-dimethylethyl)-1-methyl- (9CI) (CA INDEX NAME)



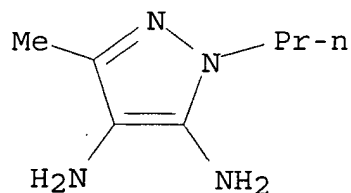
RN 199340-99-3 HCA

CN 1H-Pyrazole-3,4-diamine, 5-methyl- (9CI) (CA INDEX NAME)



RN 216320-84-2 HCA

CN 1H-Pyrazole-4,5-diamine, 3-methyl-1-propyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 CC 62-4 (Essential Oils and Cosmetics)
 Section cross-reference(s): 28
 ST **hair dye** pyrazolindione arom amine
 IT Amines, biological studies
 (arom.; compn. for **dyeing keratin** fibers
 comprising pyrazolindione and arom. primary amine)
 IT Alcohols, biological studies
 Glycols, biological studies
 (compn. for **dyeing keratin** fibers comprising
 pyrazolindione and arom. primary amine)
 IT **Hair** preparations
 (**dyes**; compn. for **dyeing keratin**
 fibers comprising pyrazolindione and arom. primary amine)
 IT Glycols, biological studies
 (ethers; compn. for **dyeing keratin** fibers
 comprising pyrazolindione and arom. primary amine)
 IT Ethers, biological studies
 (glycol; compn. for **dyeing keratin** fibers
 comprising pyrazolindione and arom. primary amine)
 IT Solvents
 (org.; compn. for **dyeing keratin** fibers
 comprising pyrazolindione and arom. primary amine)
 IT 62-53-3D, Aniline, derivs. 95-55-6 95-70-5 106-50-3,
 1,4-Benzenediamine, biological studies 123-30-8 **399-95-1**
 452-58-4, 2,3-Pyridinediamine 615-66-7 881-05-0 1004-76-8
 1630-11-1 2835-96-3 2835-98-5 2835-99-6 3240-72-0
 4592-60-3 4734-73-0 5306-96-7 13795-02-3 **16461-98-6**,
 1H-Pyrazole-3,4-diamine 17672-22-9 29785-47-5 **45514-38-3**
 49714-81-0 51942-09-7 52605-79-5 59056-57-4 62349-56-8
 62349-59-1 63886-74-8 66566-48-1 66583-86-6 69151-32-2
76368-87-1 79352-72-0 93841-24-8 **96886-30-5**
 97902-52-8 104333-09-7 110952-46-0 126335-43-1 129697-50-3
155601-16-4 160950-38-9 168202-61-7 **184172-86-9**
184172-97-2 **184172-99-4** **184173-43-1**
 197651-70-0 197651-76-6 197651-78-8 197651-80-2 197651-86-8
 197651-88-0 197651-92-6 197651-94-8 197651-95-9 197651-97-1
 197651-99-3 197652-01-0 197652-03-2 197652-05-4 197652-07-6
 197652-14-5 197652-16-7 197652-18-9 197652-20-3 197652-22-5
 197652-24-7 197652-26-9 197652-28-1 197652-30-5 197652-32-7
 197652-34-9 197652-36-1 197652-39-4 **199340-99-3**
 201599-07-7 201599-12-4, Pyrazolo[1,5-a]pyrimidine-3,7-diamine
 207568-58-9 216319-92-5 216320-73-9 216320-74-0 216320-76-2

216320-78-4 216320-80-8 216320-82-0 **216320-84-2**
 216320-85-3 216320-86-4 216320-87-5 216321-12-9
 (compn. for **dyeing keratin** fibers comprising
 pyrazolindione and arom. primary amine)

L51 ANSWER 9 OF 18 HCA COPYRIGHT 2003 ACS on STN

129:45106 Agents for **dyeing** and decolorizing fibers. Kunz, Manuela; Le Cruer, Dominique (Wella A.-G., Germany; Kunz, Manuela; Le Cruer, Dominique). PCT Int. Appl. WO 9822078 A1 **19980528**, 86 pp. DESIGNATED STATES: W: BR, JP, US; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German). CODEN: PIXXD2. APPLICATION: WO 1997-EP4699 19970829. PRIORITY: DE 1996-19647493 19961116; DE 1996-19647494 19961116; DE 1997-19716780 19970422.

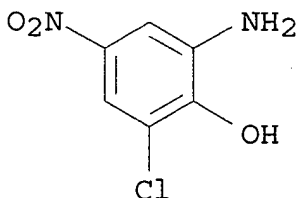
AB A multicomponent kit to **dye** or decolorize fibers, esp. **hair**, comprises agents for oxidative or nonoxidative **dyeing** of fibers as the 1st component, and agents for subsequent removal of the **coloring** by redn. with a reductone and/or thiol and/or sulfite as the 2nd component. Thus, a **dye** compn. contg. 1,4-diamino-2-(2-hydroxyethyl)benzene sulfate 0.62, 1,4-diamino-2-methylbenzene sulfate 0.55, 5-amino-2-methylphenol 0.61, di-Na EDTA 0.30, Na₂SO₃ 0.40, 28% aq. Na lauryl ether sulfate 10.00, iso-PrOH 10.00, 25% aq. NH₃ 9.10, and demineralized water to 100.00 g was mixed 1:1 with 6% H₂O₂ soln. and applied to the **hair** for 30 min at 40.degree. to produce a deep violet **color**. Treatment of the washed, dried **hair** with a decolorizing gel contg. ascorbic acid 5.00, methylhydroxyethylcellulose 2.00, cysteine 2.00, Na₂SO₃ 0.05, and H₂O to 100.00 g resulted in 87% removal of the **color**.

IT **6358-09-4 155601-17-5**

(agents for **dyeing** and decolorizing fibers)

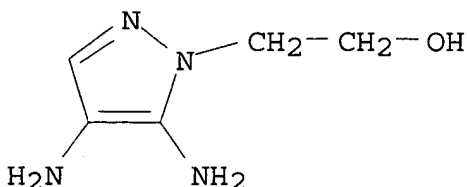
RN 6358-09-4 HCA

CN Phenol, 2-amino-6-chloro-4-nitro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 155601-17-5 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)

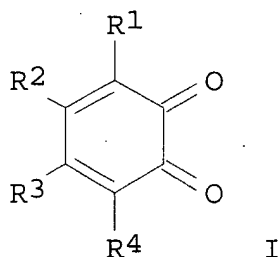


IC ICM A61K007-13
ICS A61K007-135
CC 62-3 (Essential Oils and Cosmetics)
ST **hair dye** decolorization kit; oxidative
hair dye decolorization kit
IT Decolorizing agents
Grains (particles)
Powders
Reducing agents
(agents for **dyeing** and decolorizing fibers)
IT Sulfites
Thiols (organic), biological studies
(agents for **dyeing** and decolorizing fibers)
IT **Hair** preparations
(creams; agents for **dyeing** and decolorizing fibers)
IT **Hair** preparations
(**dyes**, oxidative; agents for **dyeing** and
decolorizing fibers)
IT **Hair** preparations
(**dyes**; agents for **dyeing** and decolorizing
fibers)
IT Tablets
(effervescent, agents for **dyeing** and decolorizing
fibers)
IT **Hair** preparations
Hair preparations
(emulsions; agents for **dyeing** and decolorizing fibers)
IT **Hair** preparations
(gels; agents for **dyeing** and decolorizing fibers)
IT **Hair** preparations
(liqs.; agents for **dyeing** and decolorizing fibers)
IT **Hair** preparations
(mousses; agents for **dyeing** and decolorizing fibers)
IT Effervescent materials
(tablets; agents for **dyeing** and decolorizing fibers)
IT 94158-13-1, HC Red No. 13
(HC Red No. 13; agents for **dyeing** and decolorizing
fibers)
IT 50-81-7, L-Ascorbic acid, biological studies 50-81-7D, L-Ascorbic
acid, esters, biological studies 50-99-7, D-Glucose, biological
studies 52-67-5, Penicillamine 52-89-1, L-Cysteine hydrochloride
52-90-4, L-Cysteine, biological studies 60-23-1, Cysteamine
70-18-8, Glutathione, biological studies 80-72-8 89-65-6,
Isoascorbic acid 89-65-6D, Isoascorbic acid, esters 90-15-3,
1-Naphthol 95-53-4, biological studies 106-50-3,
1,4-Benzenediamine, biological studies 108-45-2,
1,3-Benzenediamine, biological studies 108-46-3, 1,3-Benzenediol,
biological studies 123-30-8 134-03-2, Sodium ascorbate
137-66-6, 6-O-Palmitoylascorbic acid 497-15-4 591-27-5,
3-Aminophenol 608-25-3, 1,3-Dihydroxy-2-methylbenzene 615-50-9
616-91-1, N-Acetylcysteine 770-25-2 814-71-1, Calcium

thioglycolate 2835-95-2, 5-Amino-2-methylphenol 2835-99-6,
 4-Amino-3-methylphenol 4124-63-4, Mercaptoacetaldehyde
 4319-02-2, 3,5-Dihydroxy-4-methoxybenzoic acid 5697-02-9
 6027-13-0, L-Homocysteine **6358-09-4** 7757-83-7, Sodium
 sulfite 9001-37-0, Glucose oxidase 9003-99-0, Peroxidase
 15872-73-8 32190-98-0, 2,5-Diamino-4-methylphenol dihydrochloride
 49647-58-7, 2,4,5,6-Tetraaminopyrimidine sulfate 53222-92-7,
 3-Amino-2-methylphenol 55302-96-0, 5-(2-Hydroxyethyl)amino-2-
 methylphenol 66422-95-5 73793-80-3 81892-72-0, .
 1,3-Bis(2,4-diaminophenoxy)propane 83763-48-8 90817-34-8
 93841-25-9 94158-14-2 119004-86-3 132885-85-9, HC Blue No. 12
155601-17-5 207923-06-6 207923-07-7
 (agents for **dyeing** and decolorizing fibers)

L51 ANSWER 10 OF 18 HCA COPYRIGHT 2003 ACS on STN
 128:158721 Direct **dyes** for **keratin** fibers based on
 o-quinones. Umbricht, Gisela; Braun, Hans-Juergen (Wella A.-G.,
 Germany). Ger. Offen. DE 19617486 A1 **19980129**, 14 pp.
 (German). CODEN: GWXXBX. APPLICATION: DE 1996-19617486 19960502.

GI



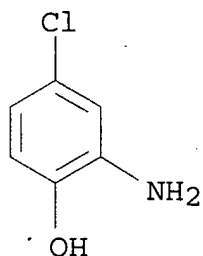
AB Direct **dyes** for human **hair** which provide
 excellent **color** intensity, excellent stability toward
 light and **shampooing**, and a wide range of **color**
 nuances are provided which comprise a combination of (a) an
 o-benzoquinone [I; R1-R4 = H, Cl, C1-5 alkyl or alkoxy,
 (substituted) amino; or adjacent pairs of R1-R4 = C1-2
 alkylenedioxy] and (b) an amino or hydroxy compd. XAY [X, Y = OH,
 (substituted) amino; A = C1-8 alkanediyl, C3-8 cycloalkanediyl,
 (substituted) arenediyl or heteroarenediyl; A .noteq. indolediyl or
 indolinediyl]. Thus, a soln. contg. 2.5 mmol 3,5-di(tert-butyl)-1,2-
 benzoquinone, 10.0 g 28% aq. Na lauryl alc. diglycol ether sulfate
 (II), 10.0 g iso-PrOH, and 80.0 g demineralized water was applied
 uniformly to the **hair** at room temp., followed after 5 min
 by a soln. contg. 5.0 mmol o-phenylenediamine, 10.0 g II, 10.0 g
 iso-PrOH, and 80.0 g demineralized water. After **color**
 development at 40.degree. for 20 min, rinsing, and drying, the
hair had an intense red-brown **color**.

IT **95-85-2**, 2-Amino-4-chlorophenol **155601-17-5**
202481-11-6

(direct dyes for keratin fibers based on
o-quinones)

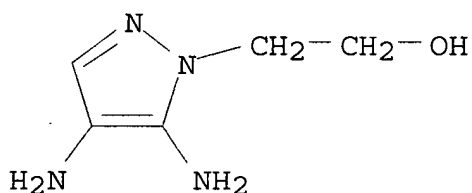
RN 95-85-2 HCA

CN Phenol, 2-amino-4-chloro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 155601-17-5 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino- (9CI) (CA INDEX NAME)



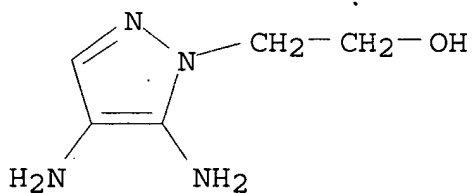
RN 202481-11-6 HCA

CN 1H-Pyrazole-1-ethanol, 4,5-diamino-, sulfate (2:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 155601-17-5

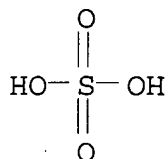
CMF C5 H10 N4 O



CM 2

CRN 7664-93-9

CMF H2 O4 S



IC ICM A61K007-13
ICS D06P003-04; C09B053-00; C09B057-00
ICA D06P003-14; D06P003-30
CC 62-3 (Essential Oils and Cosmetics)
ST direct **hair dye** quinone alc amine
IT Alcohols, biological studies
Amines, biological studies
Phenols, biological studies
(direct **dyes** for **keratin** fibers based on o-quinones)
IT **Hair** preparations
(**dyes**, direct; direct **dyes** for **keratin** fibers based on o-quinones)
IT 62-53-3, Benzenamine, biological studies 62-53-3D, Benzenamine, derivs., biological studies 95-54-5, o-Phenylenediamine, biological studies 95-55-6, 2-Aminophenol 95-70-5, 2,5-Diaminotoluene **95-85-2**, 2-Amino-4-chlorophenol 99-50-3, 3,4-Dihydroxybenzoic acid 106-50-3, 1,4-Benzenediamine, biological studies 107-15-3, 1,2-Ethanediamine, biological studies 108-45-2, m-Phenylenediamine, biological studies 120-80-9, 1,2-Benzenediol, biological studies 123-30-8, 4-Aminophenol 132-86-5, 1,3-Dihydroxynaphthalene 452-58-4, 2,3-Diaminopyridine 496-72-0, 3,4-Diaminotoluene 535-87-5, 3,5-Diaminobenzoic acid 583-63-1D, o-Benzoquinone, derivs. 610-02-6, 2,3,4-Trihydroxybenzoic acid 615-50-9 1436-59-5, cis-1,2-Diaminocyclohexane 2435-53-2, o-Chloranil 2835-98-5, 6-Amino-m-cresol 3383-21-9, 3,5-Di(tert-butyl)-1,2-benzoquinone 5348-42-5, 1,2-Diamino-4,5-dichlorobenzene 7461-66-7 21086-65-7, 4,5-Dimethoxy-1,2-benzoquinone 21505-19-1, 1,3-Benzodioxole-5,6-dione 49647-58-7 66671-82-7, 2,5-Diaminoanisole sulfate **155601-17-5** 202481-10-5, 5,7-Quinolinediamine **202481-11-6** 202481-12-7 202718-72-7, Pyridinetetramine (direct **dyes** for **keratin** fibers based on o-quinones)

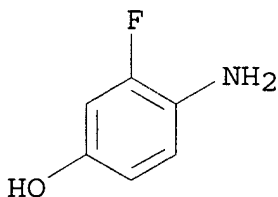
L51 ANSWER 11 OF 18 HCA COPYRIGHT 2003 ACS on STN
127:8931 oxidative **hair dye** compositions containing oxidation **dyes** and ceramide-type compounds. Laurent, Florence; Braida-Valerio, Damarys (L'Oreal S. A., Fr.; Laurent, Florence; Braida-Valerio, Damarys). PCT Int. Appl. WO 9715271 A1 **19970501**, 36 pp. DESIGNATED STATES: W: BR, CA, HU, JP, KR, MX, PL, RU, US; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (French). CODEN: PIXXD2. APPLICATION: WO 1996-FR1547 19961003. PRIORITY: FR 1995-12385 19951020.

AB A method for oxidn. **dyeing keratin** fibers, particularly human **keratin** fibers such as **hair**, using a **dye** compn. contg. at least one oxidn. **dye** and an oxidizing compn. contg. at least one oxidizing agent, wherein said **dye** compn. and/or said oxidizing compn. include at least one ceramide-type compd., is disclosed. A **hair** die compn. contained paraphenylenediamine 0.108, meta-aminophenol 0.109, N-oleoyldihydrosphingosine 2.5, excipients and water q.s. 100 g. The compn. is mixed with 1.5 time its wt. 20% hydrogen peroxide and used.

IT 399-95-1, 4-Amino-3-fluorophenol 16461-98-6,
1H-Pyrazole-3,4-diamine 45514-38-3 157469-55-1
(oxidative **hair dye** compns. contg. oxidn.
dyes and ceramide-type compds.)

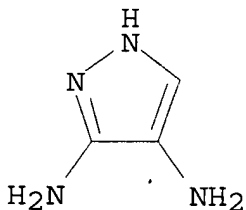
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



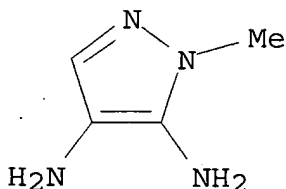
RN 16461-98-6 HCA

CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



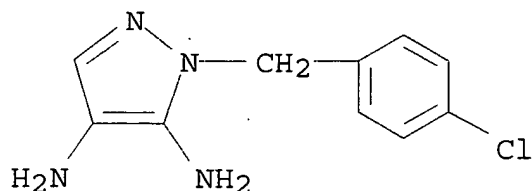
RN 45514-38-3 HCA

CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



RN 157469-55-1 HCA

CN 1H-Pyrazole-4,5-diamine, 1-[(4-chlorophenyl)methyl]- (9CI) (CA INDEX NAME)



- IC ICM A61K007-06
ICS A61K007-13
- CC 62-3 (Essential Oils and Cosmetics)
- ST oxidative **hair dye** ceramide oxidizing agent
- IT Alcohols, biological studies
(Cl-4; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Bromates
(alkali metal salts; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT **Hair** preparations
(**dyes**, oxidative; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Glycols, biological studies
(ethers; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Ethers, biological studies
(glycol; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Salts, biological studies
(of peroxy acids; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Solvents
(org.; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Ceramides
Glycols, biological studies
Peroxides, biological studies
Peroxyulfates
(oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT Group IIIA element compounds
(perborates; oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 92-65-9 93-05-0,
N,N-Diethyl-p-phenylenediamine 95-55-6, 2-Aminophenol 95-70-5
99-98-9, N,N-Dimethyl-p-phenylenediamine 101-54-2 106-50-3,
1,4-Benzenediamine, biological studies 123-30-8, p-Aminophenol
124-43-6 148-71-0 399-95-1, 4-Amino-3-fluorophenol
537-65-5 615-66-7 1004-74-6, Pyrimidinetetramine 1004-75-7
1630-11-1, 2,6-Diethyl-p-phenylenediamine 2304-80-5 2359-53-7
2835-96-3, 4-Amino-2-methyl-phenol 2835-98-5, 2-Amino-5-methylphenol
2835-99-6, 4-Amino-3-methyl-phenol 4318-76-7,
2,5-Diaminopyridine 5306-96-7 5862-80-6 5966-29-0 6393-01-7,

2,5-Dimethyl-p-phenylenediamine 7218-02-2, 2,6-Dimethyl-p-phenylenediamine 7575-35-1 7722-84-1, Hydrogen peroxide., biological studies 14791-78-7 **16461-98-6**, 1H-Pyrazole-3,4-diamine 17625-88-6 17625-92-2 17672-22-9, 2-Amino-6-methylphenol 29785-47-5, 4-Amino-2-methoxymethyl-phenol 34227-66-2, N-Linoleoyldihydrosphingosine 34227-83-3 34354-88-6 **45514-38-3** 63969-43-7 73793-80-3 79352-72-0 80467-77-2 93841-24-8 97902-52-8 104333-09-7 105293-89-8, N,N-Dipropyl-p-phenylenediamine 110952-46-0 126335-43-1 128729-30-6 128729-31-7 129697-50-3 130582-53-5 135855-34-4 135855-35-5 147492-65-7 **157469-55-1** 168167-99-5 168202-61-7 190249-36-6
(oxidative **hair dye** compns. contg. oxidn. **dyes** and ceramide-type compds.)

L51 ANSWER 12 OF 18 HCA COPYRIGHT 2003 ACS on STN

126:308636 Oxidative **hair dye** compositions

containing 4-hydroxyindoline derivatives as coupling agents.

Audousset, Marie-pascale (Oreal S. A., Fr.; Audousset,

Marie-Pascale). PCT Int. Appl. WO 9711673 A1 **19970403**, 30

pp. DESIGNATED STATES: W: CA, JP, US; RW: AT, BE, CH, DE, DK, ES,

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (French). CODEN:

PIXXD2. APPLICATION: WO 1996-FR1472 19960920. PRIORITY: FR

1995-11223 19950925.

AB A ready-to-use compn. for the oxidative **dyeing** of **keratin** fibers, such as **hair**, contains in an acid medium (pH < 7), one or more oxidative bases, combined with 4-hydroxyindoline (I) as a coupling agent and an oxidizing agent. An oxidative **hair** prepn. contained paratoluylenediamine 0.584, I 0.405, and excipients and water q.s. 100 g. Equal amts. of the above compn. and 20 vol. hydrogen peroxide are mixed and applied on the **hair** for 30 min, then the **hair** is washed and dried.

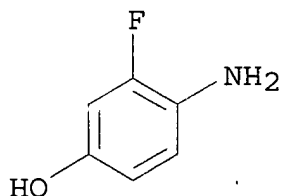
IT **399-95-1**, 4-Amino-3-fluorophenol **16461-98-6**, 1H-Pyrazole-3,4-diamine **45514-38-3** **157469-55-1**

(oxidative **hair dye** compns. contg.

4-hydroxyindoline derivs. as coupling agents)

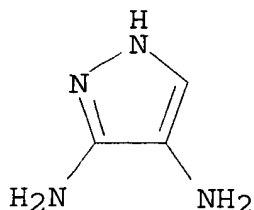
RN **399-95-1** HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

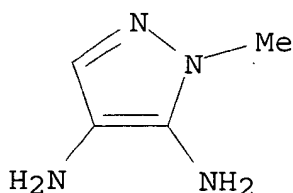


RN **16461-98-6** HCA

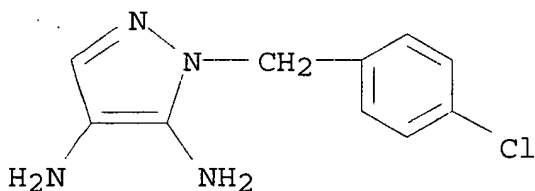
CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN 45514-38-3 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



RN 157469-55-1 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-[(4-chlorophenyl)methyl]- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** hydroxyindoline coupling agent
 IT **Hair** preparations
 (**dyes**, oxidative; oxidative **hair dye**
 compns. contg. 4-hydroxyindoline derivs. as coupling agents)
 IT Coupling agents
 (oxidative **hair dye** compns. contg.
 4-hydroxyindoline derivs. as coupling agents)
 IT 92-65-9 93-05-0 95-55-6, 2-Aminophenol 95-70-5 99-98-9
 101-54-2 106-50-3, 1,4-Benzenediamine, biological studies
 123-30-8 148-71-0 **399-95-1**, 4-Amino-3-fluorophenol
 537-65-5 615-66-7 1004-74-6, 2,4,5,6-Tetraaminopyrimidine
 1004-75-7 1630-11-1 2359-52-6 2359-53-7 2835-96-3,
 4-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol
 2835-99-6, 4-Amino-3-methylphenol 4318-76-7, Pyridine-2,5-diamine
 5306-96-7 5862-80-6 6393-01-7 7218-02-2 7575-35-1
 14791-78-7 **16461-98-6**, 1H-Pyrazole-3,4-diamine

17672-22-9, 2-Amino-6-methylphenol 19298-14-7 29785-47-5,
4-Amino-2-methoxymethylphenol **45514-38-3** 63969-43-7
66566-48-1 73793-80-3 79352-72-0 80467-77-2 85926-99-4,
4-Hydroxyindoline 97902-52-8 104333-09-7 105293-89-8
105607-68-9 110952-46-0 128729-30-6 128729-31-7 129697-50-3
130582-53-5 135855-34-4 135855-35-5 **157469-55-1**
168202-61-7

(oxidative **hair dye** compns. contg.

4-hydroxyindoline derivs. as coupling agents)

L51 ANSWER 13 OF 18 HCA COPYRIGHT 2003 ACS on STN

125:338699 Oxidative **hair dye** compositions

containing 6-hydroxyindoline and coupling agents and oxidizing
agents. Maubru, Mireille (Oreal S. A., Fr.). Fr. Demande FR
2730926 A1 **19960830**, 23 pp. (French). CODEN: FRXXBL.
APPLICATION: FR 1995-2273 19950227.

AB The title compns. are disclosed. An oxidative **hair
dye** compn. contained paraphenylenediamine 0.324,
6-hydroxyindoline.HCl 0.515, excipients, preservative, fragrance and
antioxidants q.s. 100 g. At the time of use, the above compn. is
mixed with equal amt. of 20 vol. hydrogen peroxide and applied to
the **hair**.

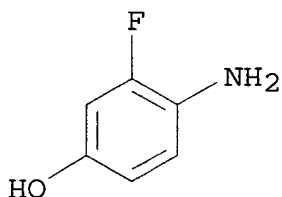
IT **399-95-1**, 4-Amino-3-fluoro phenol **16461-98-6**,
1H-Pyrazole-3,4-diamine **45514-38-3**, 4,5-Diamino-1-methyl
pyrazole

(oxidative **hair dye** compns. contg.

6-hydroxyindoline and coupling agents and oxidizing agents)

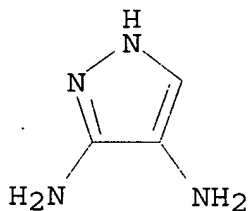
RN **399-95-1** HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



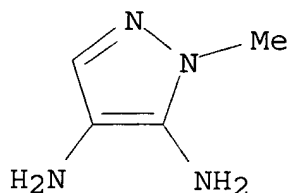
RN **16461-98-6** HCA

CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN **45514-38-3** HCA

CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)

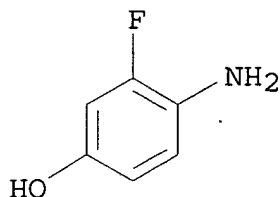


IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** hydroxyindoline coupling agent
 IT Oxidizing agents
 (oxidative **hair dye** compns. contg.
 6-hydroxyindoline and coupling agents and oxidizing agents)
 IT Coupling agents
 Perborates
 Peroxysulfates
 (oxidative **hair dye** compns. contg.
 6-hydroxyindoline and coupling agents and oxidizing agents)
 IT 92-65-9 93-05-0 95-55-6, 2-Amino-phenol 95-70-5 99-98-9
 101-54-2 106-50-3, 1,4-Benzenediamine, biological studies
 123-30-8 124-43-6 148-71-0, 4-Amino-N,N-diethyl 3-methyl aniline
399-95-1, 4-Amino-3-fluoro phenol 537-65-5 615-45-2
 615-66-7 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7,
 4-Hydroxy-2,5,6-triaminopyrimidine 1630-11-1 2359-52-6
 2359-53-7 2835-98-5, 2-Amino-5-methyl-phenol 2835-99-6,
 4-Amino-3-methyl phenol 4318-76-7, 2,5-Diaminopyridine
 4770-37-0, 6-Hydroxyindoline 5306-96-7 5862-80-6 6393-01-7
 7218-02-2 7575-35-1 7722-84-1, Hydrogen peroxide, biological
 studies 7789-31-3D, Bromic acid, alkali metal salts 14791-78-7
16461-98-6, 1H-Pyrazole-3,4-diamine 17672-22-9,
 2-Amino-6-methyl-phenol 19298-14-7 29785-47-5;
 4-Amino-2-methoxymethyl phenol **45514-38-3**,
 4,5-Diamino-1-methyl pyrazole 56496-89-0 63969-43-7 66566-48-1
 73793-80-3 79352-72-0 80467-77-2 97902-51-7 97902-52-8
 105293-89-8 105607-68-9 110952-46-0 126335-43-1 128729-30-6
 128729-31-7 129697-50-3 130582-53-5 135855-34-4 135855-35-5
 160950-38-9 168202-61-7
 (oxidative **hair dye** compns. contg.
 6-hydroxyindoline and coupling agents and oxidizing agents)

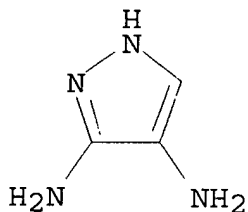
L51 ANSWER 14 OF 18 HCA COPYRIGHT 2003 ACS on STN
 125:256746 Oxidative **hair dyes** containing two
 oxidation bases and an indole coupling agent. Audousset,
 Marie-Pascale; De La Mettrie, Roland; Cotteret, Jean; Grimault,
 Christelle (Oreal S. A., Fr.). Eur. Pat. Appl. EP 728463 A1
19960828, 22 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES,
 FR, GB, IT, LI, NL, SE. (French). CODEN: EPXXDW. APPLICATION: EP
 1996-400182 19960125. PRIORITY: FR 1995-2269 19950227.
 AB The title compns. are disclosed. An oxidative **hair**

dye compns. contained 2,6-dimethylparaphenylenediamine 0.2, p-aminophenol 0.2, 4-hydroxyindole 0.4, vehicle contg. solvents, preservative and water q.s. 100 g.

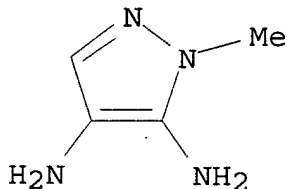
IT 399-95-1, 4-Amino-3-fluorophenol 16461-98-6,
1H-Pyrazole-3,4-diamine 45514-38-3, 4,5-Diamino-1-methylpyrazole
(oxidative **hair dyes** contg. two oxidn. bases
and indole coupling agent)
RN 399-95-1 HCA
CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 16461-98-6 HCA
CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN 45514-38-3 HCA
CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13
CC 62-3 (Essential Oils and Cosmetics)
ST oxidative **hair dye** indole coupling agent
IT Alcohols, uses
(C1-4; oxidative **hair dyes** contg. two oxidn.
bases and indole coupling agent)
IT Bromates
(alkali metal salts; oxidative **hair dyes**
contg. two oxidn. bases and indole coupling agent)
IT Coupling agents

Oxidizing agents

Solvents

(oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Perborates

(oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Glycols, uses

(oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Salts, biological studies

(peroxy acids; oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Alcohols, uses

(aralkyl, oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Hair preparations

(**dyes**, oxidative, oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT Ethers, uses

(glycol, oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT 95-55-6, 2-Aminophenol 95-70-5 106-50-3, 1,4-Benzenediamine, biological studies 123-30-8, p-Aminophenol 124-43-6
399-95-1, 4-Amino-3-fluorophenol 615-66-7 1004-74-6,
 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 1630-11-1 2380-94-1, 4-Hydroxyindole
 2835-96-3, 4-Amino-2-methylphenol 2835-98-5 2835-99-6,
 4-Amino-3-methylphenol 4318-76-7, 2,5-Diaminopyridine 5306-96-7
 7218-02-2 7556-37-8 7575-35-1 7722-84-1, Hydrogen peroxide, biological studies 15092-81-6, Peroxydisulfate ((SO₃)₂O₂-)
16461-98-6, 1H-Pyrazole-3,4-diamine 17672-22-9
 19499-83-3 29785-47-5, 4-Amino-2-methoxymethylphenol 35320-67-3,
 4-Hydroxy-2-methylindole **45514-38-3**, 4,5-Diamino-1-methylpyrazole 49635-16-7, 4-Hydroxy-5-methoxyindole 56496-89-0
 63969-43-7 66566-48-1 79352-72-0 93841-24-8 97902-52-8,
 2-Isopropyl-p-phenylenediamine 104333-09-7 110952-46-0
 126335-43-1 128729-30-6 128729-31-7 129697-50-3 130570-26-2
 130570-27-3 130570-31-9 130582-53-5 135855-34-4 135855-35-5
 135855-39-9 160950-38-9 168202-61-7

(oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

IT 56-81-5, Glycerol, uses

(oxidative **hair dyes** contg. two oxidn. bases and indole coupling agent)

L51 ANSWER 15 OF 18 HCA COPYRIGHT 2003 ACS on STN

125:230176 Oxidative **hair dye** compositions

comprising an oxidation base, an indolic coupler and an additional heterocyclic coupler. Audousset, Marie-Pascale; Cotteret, Jean (Oreal S. A., Fr.). Eur. Pat. Appl. EP 728466 A1 **19960828**

, 23 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, IT, LI,

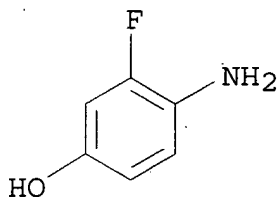
NL, SE. (French). CODEN: EPXXDW. APPLICATION: EP 1996-400287
19960212. PRIORITY: FR 1995-2270 19950227.

AB The title compns. are disclosed (Markush structures given). A
hair dye prepn. contained 2,6-dimethyl-p-
phenylenediamine.2HCl 1.0, 4-hydroxy-1-methylindole 0.5,
1-amino-6-methoxy-3,4-methylenedioxybenzene.HCl and excipients q.s.
100 g. The compn. is mixed with equal vol. of 20 vol. H2O2 and
applied to the **hair** for 30 min. to obtain a chestnut brown
color.

IT 399-95-1, 4-Amino-3-fluorophenol 16461-98-6,
1H-Pyrazole-3,4-diamine 45514-38-3, 4,5-Diamino-1-
methylpyrazole
(oxidative **hair dye** compns. comprising oxidn.
base, indolic coupler and addnl. heterocyclic coupler)

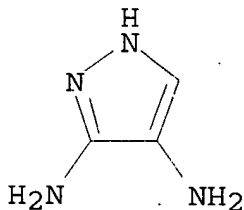
RN 399-95-1 HCA

CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



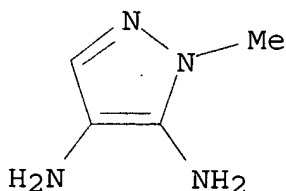
RN 16461-98-6 HCA

CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



RN 45514-38-3 HCA

CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

ST oxidative **hair dye** indole heterocyclic coupler

IT **Hair** preparations

(**dyes**, oxidative, oxidative **hair dye**

compns. comprising oxidn. base, indolic coupler and addnl. heterocyclic coupler)

IT 95-55-6, 2-Aminophenol 95-70-5 106-50-3, p-Phenylenediamine, biological studies 123-30-8, p-Aminophenol 141-86-6, 2,6-Diaminopyridine 399-95-1, 4-Amino-3-fluorophenol 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 4-Hydroxy-2,5,6-triaminopyrimidine 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-96-3, 4-Amino-2-methylphenol 2835-98-5 2835-99-6, 4-Amino-3-methylphenol 3131-52-0, 5,6-Dihydroxyindole 4318-76-7, 2,5-Diaminopyridine 4331-29-7, 4-Aminobenzimidazole 4701-08-0, 1H-Benzimidazole-5,6-diol, 1-methyl- 5192-04-1, 7-Aminoindole 5192-23-4, 4-Aminoindole 5318-27-4, 6-Aminoindole 6941-70-4 7218-02-2, 2,6-Dimethyl-p-Phenylenediamine 7556-37-8 7711-50-4, 4,7-Dimethoxybenzimidazole 10501-17-4, 5-Ethoxyindole 16461-98-6, 1H-Pyrazole-3,4-diamine 17672-22-9 19499-83-3 26011-57-4, 6-Aminobenzomorpholine 26021-57-8 26438-50-6 29785-47-5, 4-Amino-2-methoxymethylphenol 35320-67-3, 4-Hydroxy-2-methylindole 45514-38-3, 4,5-Diamino-1-methylpyrazole 49635-16-7, 4-Hydroxy-5-methoxyindole 51437-33-3, 1H-Benzimidazole-5,6-diol, 2-methyl- 56496-89-0, 2,6-Dimethyl-p-phenylenediamine dihydrochloride 67021-83-4, 4-Hydroxybenzimidazole 69151-32-2 72721-02-9, 5,6-Dimethoxybenzimidazole 79352-72-0 84540-47-6 85679-78-3 93841-24-8 94977-60-3, 4-Hydroxy-2-methylbenzimidazole 96013-05-7, 4-Amino-2-methylbenzimidazole 102169-73-3, 1H-Benzimidazole-5,6-diol 102170-38-7, 4,7-Dihydroxybenzimidazole 104333-03-1 104333-09-7 110952-46-0 115132-95-1 117907-42-3 126462-95-1, 1H-Benzimidazol-4-ol, 7-methyl- 129697-50-3 130570-26-2 130570-27-3 130570-31-9 130570-60-4, 6-Hydroxy-1-methylindole 135855-39-9 145594-51-0 157587-56-9, 1H-Benzimidazol-4-ol, 1-butyl- 157587-57-0, 1H-Benzimidazol-5-ol, 6-methoxy 157587-58-1, 1H-Benzimidazole-4,7-diol, 1-methyl- 168202-61-7 181777-16-2 181777-19-5

(oxidative **hair dye** compns. comprising oxidn.

base, indolic coupler and addnl. heterocyclic coupler)

L51 ANSWER 16 OF 18 HCA COPYRIGHT 2003 ACS on STN

125:150748 Oxidative **hair dyeing** compositions

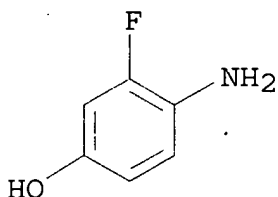
comprising a **dye** precursor, 4-hydroxyindole, benzene coupling agent, and oxidizing agent. Audousset, Marie-Pascale; Cotteret, Jean (Oreal S. A., Fr.). Eur. Pat. Appl. EP 722710 A1 19960724, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE. (French). CODEN: EPXXDW. APPLICATION: EP 1996-400013 19960103. PRIORITY: FR 1995-661 19950120.

AB Oxidative **hair dyeing** compns. comprise a

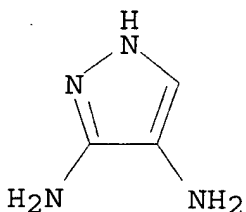
dye precursor, 4-hydroxyindole (I), benzene coupling agent, and oxidizing agent. A **hair dye** prepn. contained 2,6-dimethylparaphenylenediamine.2HCl 0.5, I 0.1, 2-amino-4-N-(.beta.-hydroxyethylamino)anisole.2HCl 0.4, excipient,

fragrance, antioxidant and water q.s. 100%. At the time of **dyeing** the compn. is mixed with equal amt. of 20 vol. hydrogen peroxide and applied to **hair** to obtain a dark blue **coloring**.

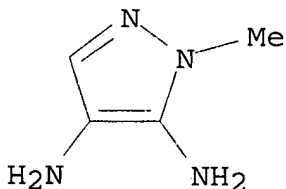
IT 399-95-1, 3-Fluoro-4-aminophenol 16461-98-6,
1H-Pyrazole-3,4-diamine 45514-38-3, 4,5-Diamino-1-
methylpyrazole 110102-86-8 131311-65-4,
3,4-Diaminopyrazole dihydrochloride
(oxidative **hair dyeing** compns. comprising
dye precursor, hydroxyindole, benzene coupling agent, and
oxidizing agent)
RN 399-95-1 HCA
CN Phenol, 4-amino-3-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



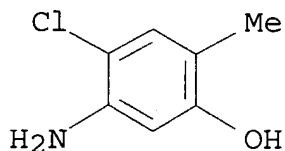
RN 16461-98-6 HCA
CN 1H-Pyrazole-3,4-diamine (9CI) (CA INDEX NAME)



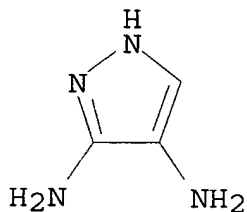
RN 45514-38-3 HCA
CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



RN 110102-86-8 HCA
CN Phenol, 5-amino-4-chloro-2-methyl- (9CI) (CA INDEX NAME)



RN 131311-65-4 HCA
 CN 1H-Pyrazole-3,4-diamine, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

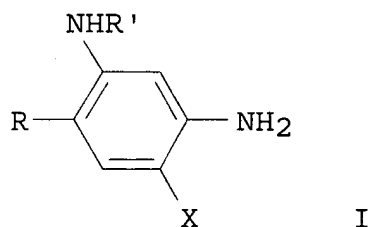
IC ICM A61K007-13
 CC 62-3 (Essential Oils and Cosmetics)
 ST oxidative **hair dye** coupling agent oxidizer;
 paraphenylenediamine hydroxyindole anisole oxidative **hair dye**
 IT Antioxidants
 (oxidative **hair dyeing** compns. comprising
dye precursor, hydroxyindole, benzene coupling agent, and
 oxidizing agent)
 IT **Hair** preparations
 (**dyes**, oxidative, oxidative **hair dyeing** compns. comprising **dye**
 precursor, hydroxyindole, benzene coupling agent, and oxidizing
 agent)
 IT **Hair** preparations
 (**dyes**, oxidative, gels, oxidative **hair dyeing** compns. comprising **dye**
 precursor, hydroxyindole, benzene coupling agent, and oxidizing
 agent)
 IT 95-70-5 106-50-3, p-Phenylenediamine, biological studies
 108-46-3, 1,3-Benzenediol, biological studies 123-30-8,
 p-Aminophenol 399-95-1, 3-Fluoro-4-aminophenol 591-27-5
 1004-74-6, Pyrimidinetetramine 1004-75-7, 4-Hydroxy-2,5,6,-
 triaminopyrimidine 1630-11-1, 2,6-Diethyl-p-phenylenediamine
 1687-53-2, 5-Amino-2-methoxyphenol 2835-95-2, 2-Methyl-5-
 aminophenol 2835-96-3, 2-Methyl-4-aminophenol 2835-99-6,
 3-Methyl-4-aminophenol 4318-76-7, 2,5-Diaminopyridine 5306-96-7
 5862-77-1 7218-02-2, 2,6-Dimethyl-p-phenylenediamine 7575-35-1

7722-84-1, Hydrogen peroxide, biological studies 16461-98-6
 , 1H-Pyrazole-3,4-diamine 29785-47-5, 2-Methoxymethyl-4-aminophenol 45514-38-3, 4,5-Diamino-1-methylpyrazole
 55302-96-0 66566-48-1 70643-19-5 75513-65-4 79352-72-0
 79858-66-5 81892-72-0 83763-47-7 86817-42-7 93841-24-8
 94082-77-6 97902-52-8, 2-Isopropyl-p-phenylenediamine
 104333-09-7, 2-Hydroxymethyl-4-aminophenol 104752-49-0
 104752-50-3 110102-86-8 110952-46-0 114109-54-5
 115423-85-3 126335-43-1 131311-65-4, 3,4-Diaminopyrazole dihydrochloride 137290-78-9 137290-86-9 141614-04-2
 141614-05-3 146658-65-3 168092-23-7 168202-61-7,
 3-Hydroxymethyl-4-aminophenol 180156-45-0
 (oxidative **hair dyeing** compns. comprising
dye precursor, hydroxyindole, benzene coupling agent, and
 oxidizing agent)

L51 ANSWER 17 OF 18 HCA COPYRIGHT 2003 ACS on STN

124:178878 **Hair dyeing** compositions and
 2-(alkylamino)-4-amino-1-alkylbenzenes. Balzer, Wolfgang; Frank, Anke; Weinges, Alexa (Wella A.-G., Germany). Eur. Pat. Appl. EP 687669 A1 19951220, 17 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT. (German). CODEN: EPXXDW. APPLICATION: EP 1995-101867 19950211. PRIORITY: DE 1994-4421397 19940618.

GI



AB Oxidative **hair dyeing** compns. contain as
 couplers 0.01-5% I (R = C1-4-alkyl, R' = C1-4-alkyl,
 C2-4-hydroxyalkyl; X = Cl, C1-4-alkoxy) or their physiol. compatible
 water-sol. salts, in addn. to developers and optionally other
 couplers and other **coloring** agents. The compns. have good
 storage stability and provide good **color** purity in many
 shades. Thus, 4-amino-2-(2-hydroxyethylamino)-5-methoxytoluene (II)
 0.08, 2-(2-hydroxyethyl)-1,4-diaminobenzene sulfate 1.00, resorcinol
 0.35, m-aminophenol 0.05, Na2SO3 0.40, oleic acid 15.00, iso-PrOH
 7.00, 22% aq. ammonia 10.00, and water 62.12 g were combined to give
 a **hair-dyeing** compn. which was mixed in gel form
 with H2O2 and applied to blond **hair** to provide a natural
 brown shade. II was prepd. starting with 5-fluoro-2-methylaniline,
 using the steps of nitration, condensation with 2-chloroethyl
 chloroformate, hydrolysis, and redn.

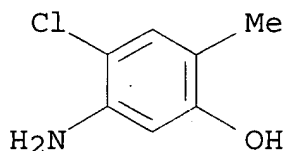
IT 110102-86-8, 3-Amino-4-chloro-6-methylphenol

122455-85-0

(hair-dyeing couplers)

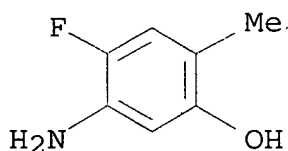
RN 110102-86-8 HCA

CN Phenol, 5-amino-4-chloro-2-methyl- (9CI) (CA INDEX NAME)



RN 122455-85-0 HCA

CN Phenol, 5-amino-4-fluoro-2-methyl- (9CI) (CA INDEX NAME)



IT 45514-38-3, 4,5-Diamino-1-methylpyrazole 131311-66-5

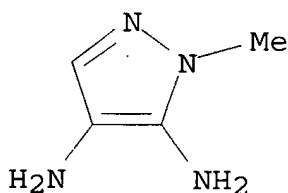
155601-16-4, 4,5-Diamino-1-isopropylpyrazole

174024-69-2, 4,5-Diamino-1-(methylbenzyl)pyrazole

(hair-dyeing developers)

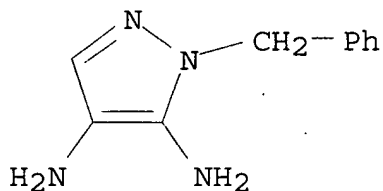
RN 45514-38-3 HCA

CN 1H-Pyrazole-4,5-diamine, 1-methyl- (9CI) (CA INDEX NAME)



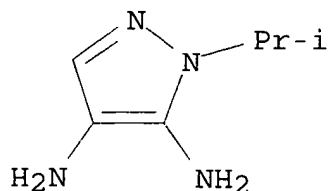
RN 131311-66-5 HCA

CN 1H-Pyrazole-4,5-diamine, 1-(phenylmethyl)- (9CI) (CA INDEX NAME)

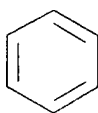


RN 155601-16-4 HCA

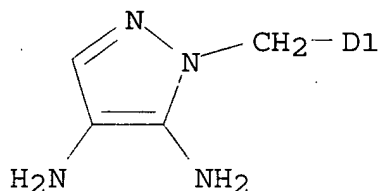
CN 1H-Pyrazole-4,5-diamine, 1-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 174024-69-2 HCA
 CN 1H-Pyrazole-4,5-diamine, 1-[(methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



D1-Me



IC ICM C07C217-84
 ICS C07C211-52; A61K007-13
 CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 Section cross-reference(s): 62
 ST **hair dye** coupler aminoaniline prepn
 IT **Hair** preparations
 (dyes, oxidative, prepn. and use of **hair-dyeing** couplers)
 IT 96-91-3, 2-Amino-4,6-dinitrophenol 128-95-0, 1,4-Diaminoanthraquinone 632-99-5, C.I.Basic Violet 14 2475-45-8, 1,4,5,8-Tetraaminoanthraquinone 2835-98-5, 2-Amino-5-methylphenol 3248-91-7, C.I.Basic Violet 2 5858-51-5, C.I. Acid Brown 4 17672-22-9, 6-Amino-2-methylphenol 24905-87-1, 2-Amino-5-(2-hydroxyethylamino)nitrobenzene 27080-42-8, 1-(2-Ureidoethylamino)-4-nitrobenzene 100418-33-5, 4-(2-Hydroxyethylamino)-3-nitrotoluene
 (hair-dyeing color components)
 IT 90-15-3, 1-Naphthalenol 95-88-5, 4-Chlororesorcinol 108-45-2, 1,3-Benzenediamine, uses 108-46-3, 1,3-Benzenediol, uses 137-19-9, 4,6-Dichlororesorcinol 533-31-3, 4-Hydroxy-1,2-

methylenedioxybenzene 591-27-5, m-Aminophenol 608-25-3,
 2-Methylresorcinol 2380-94-1, 4-Hydroxyindole 2835-95-2,
 5-Amino-2-methylphenol 53222-92-7, 3-Amino-2-methylphenol
 70643-19-5, 2-(2,4-Diaminophenoxy)ethanol 81329-90-0,
 4-(2-Hydroxyethylamino)-1,2-methylenedioxybenzene 83763-47-7,
 2-Amino-4-(2-hydroxyethylamino)anisole 85679-78-3 86817-42-7,
 2-(4-Amino-2-hydroxyphenoxy)ethanol 110102-86-8,
 3-Amino-4-chloro-6-methylphenol 122455-85-0 139443-57-5
 141614-04-2

(**hair-dyeing** couplers)

IT 95-70-5, 2,5-Diaminotoluene 106-50-3, 1,4-Benzenediamine, uses
 123-30-8 1004-74-6, Tetraaminopyrimidine 2835-99-6,
 4-Amino-3-methylphenol 45514-38-3, 4,5-Diamino-1-
 methylpyrazole 79352-72-0 93841-24-8 130582-61-5
 131311-66-5 155601-16-4, 4,5-Diamino-1-
 isopropylpyrazole 168202-62-8 174024-69-2,
 4,5-Diamino-1-(methylbenzyl)pyrazole

(**hair-dyeing** developers)

IT 446-18-4P 34648-99-2P 173552-27-7P, 2-Chloroethyl
 N-(4-fluoro-2-methyl-5-nitrophenyl)carbamate 173552-28-8P,
 2-(2-Hydroxyethylamino)-5-methoxy-4-nitrotoluene 173552-29-9P,
 5-Ethoxy-2-(2-hydroxyethylamino)-4-nitrotoluene 173552-30-2P,
 2-Chloroethyl N-(4-chloro-2-methyl-5-nitrophenyl)carbamate
 175421-07-5P

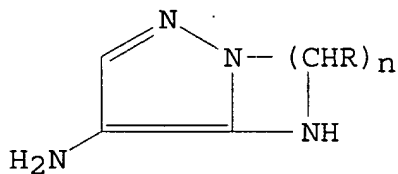
(intermediate; prepn. and use of **hair-dyeing**
 couplers)

IT 173552-24-4P, 4-Amino-2-(2-hydroxyethylamino)-5-methoxytoluene
 173552-25-5P, 4-Amino-5-ethoxy-2-(2-hydroxyethylamino)toluene
 173552-26-6P, 4-Amino-5-chloro-2-(2-hydroxyethylamino)toluene
 (prepn. and use of **hair-dyeing** couplers)

IT 95-69-2, 2-Amino-5-chlorotoluene 452-71-1, 4-Fluoro-2-
 methylaniline 627-11-2, 2-Chloroethyl chloroformate
 (starting material; prepn. and use of **hair-**
dyeing couplers)

L51 ANSWER 18 OF 18 HCA COPYRIGHT 2003 ACS on STN
 119:55695 Preparation and use of aminopyrazole derivatives in
hair dyes. Neunhoeffter, Hans; Gerstung, Stefan;
 Clausen, Thomas; Balzer, Wolfgang R. (Wella AG, Germany). Ger.
 Offen. DE 4133957 A1 19930415, 7 pp. (German). CODEN:
 GWXXBX. APPLICATION: DE 1991-4133957 19911014.

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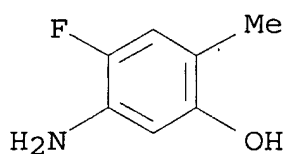


AB Aminopyrazoles I (R = H, C1-4 alkyl; n = 2, 3) and their water-sol. salts are developers for oxidative **hair dyes**. Thus, 3-amino-4-nitropyrzazole was reduced with NaH and condensed with 1,3-dibromopropane to form 3-nitro-4,5,6,7-tetrahydropyrzazolo[1,5-a]pyrimidine, which was reduced to I (R = H, n = 3) (II) with H₂ over Pd/C. A gel contg. II 1.00, 5-amino-2-methylphenol (coupler) 0.50, Na₂SO₃ 0.15, Na lauryl alc. diglycol ether sulfate 5.00, hydroxyethylcellulose 1.00, 22% aq. NH₃ 10.00, and H₂O 82.35 g was mixed 1:1 with 6% H₂O₂ soln. and applied to blond **hair** to impart an intense crimson **color**

IT 122455-85-0 139443-59-7
(as coupler, for aminopyrazole-derived oxidative **hair dyes**)

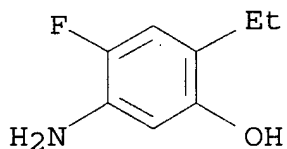
RN 122455-85-0 HCA

CN Phenol, 5-amino-4-fluoro-2-methyl- (9CI) (CA INDEX NAME)



RN 139443-59-7 HCA

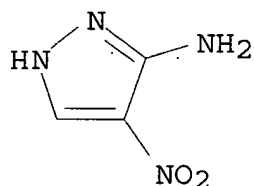
CN Phenol, 5-amino-2-ethyl-4-fluoro- (9CI) (CA INDEX NAME)



IT 16115-82-5, 3-Amino-4-nitropyrzazole
(condensation of, with dibromopropane)

RN 16115-82-5 HCA

CN 1H-Pyrazol-3-amine, 4-nitro- (9CI) (CA INDEX NAME)



IC ICM C07D487-04

ICS A61K007-13

ICA D06P003-08; D06P001-32

ICI C07D487-04, C07D231-00, C07D235-00, C07D239-00

- CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 28
- ST aminopyrazole deriv oxidative **hair dye**
- IT **Hair preparations**
(**dyes**, oxidative, aminopyrazoles as developers for)
- IT 90-15-3, 1-Naphthalenol 95-88-5, 4-Chlororesorcinol 108-45-2,
1,3-Benzenediamine, biological studies 108-46-3, Resorcinol,
biological studies 137-19-9, 4,6-Dichlororesorcinol 533-31-3,
4-Hydroxy-1,2-methylenedioxybenzene 608-25-3, 2-Methylresorcinol
2380-94-1, 4-Hydroxyindole 2835-95-2, 5-Amino-2-methylphenol
5862-77-1, 2,4-Diaminophenetole 14268-66-7, 4-Amino-1,2-
methylenedioxybenzene 14572-93-1 53222-92-7,
3-Amino-2-methylphenol 70643-19-5, 2,4-Diaminophenoxyethanol
73752-12-2, 2,4-Diaminobenzyl alcohol 81329-90-0 83763-47-7,
2-Amino-4-(2'-hydroxyethyl)aminoanisole 85679-78-3 86817-42-7,
4-Amino-2-hydroxyphenoxyethanol 104333-03-1, 3-Amino-5-hydroxy-2,6-
dimethoxypyridine **122455-85-0** 137290-78-9,
5-Amino-4-methoxy-2-methylphenol **139443-59-7** 141614-04-2
141614-05-3
(as coupler, for aminopyrazole-derived oxidative **hair**
dyes)
- IT **16115-82-5**, 3-Amino-4-nitropyrazole
(condensation of, with dibromopropane)
- IT 148777-81-5P 148777-82-6P 148777-83-7P
(prepn. of, as oxidative **hair dye** developer)
- IT 28466-26-4DP, 4-Aminopyrazole, derivs.
(prepn. of, as oxidative **hair dye** developers)